

APPLICATIONS OF FACTORIAL ANALYSIS TO  
ARITHMETICAL ABILITY ESPECIALLY THE ABILITY TO  
SOLVE PROBLEMS

by

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APPENDIX I.

Unpublished Original Tests Used in the Research.



## INSTRUCTIONS FOR ADMINISTRATION OF MORAY HOUSE TESTS

1. It cannot be too strongly emphasised that the following procedure should be adhered to exactly. In particular, great care must be exercised in the timing of tests, and the supervisor should be provided with a watch which has a seconds hand. If a stop watch is used, its accuracy should be confirmed by comparison with the seconds hand of an ordinary watch, as stop watches are often seriously in error.
2. The tests are answered in pencil on the pages of the test booklets. Ideally each child should be provided with two sharpened pencils before the test; alternatively, the supervisor should have a supply of spare pencils at hand in case any child breaks his pencil point during the test. In the latter case the children should be told before the test that anyone who breaks his pencil point during the test should at once hold up his hand.
3. Apart from the test booklets and pencils, no other material is to be allowed: no rulers, india-rubbers, scribbling paper, pens, etc.
4. If possible there should be two invigilators to each room. One invigilator should stand at the desk facing the children, reading the instructions when necessary, keeping the time with a watch before him, observing that no child looks at his neighbour's paper, and generally supervising the whole arrangements. He should not permit himself to be distracted by callers entering the room, by talking to anybody, by reading the test booklet himself, or by attempting to do work of his own during the period. Copying, which is comparatively easy with this type of examination, should be carefully guarded against.
5. The second invigilator should patrol the room quietly and unobtrusively. He should have with him a reserve supply of pencils in case any child breaks his pencil point, so that no time is wasted. Besides watching the class and observing that no child copies, he should be on the alert to see that the children turn over the pages correctly, and that each child after completing one page goes straight on to the next without waiting for a signal. In general, he should see that the children carry out the instructions as to the method of answering to the best of their ability. As a rule, however, it will only be obvious blunderers who need a special eye upon them in these respects. There are always a few who write when they have to underline, or vice versa, endeavour unnecessarily to rewrite questions or sums, or make some similar mistake. An indication with the finger or a whispered word of explanation is sufficient in these instances. Otherwise no assistance whatever is to be given.

Junior Arithmetic Test 1 A.

After filling in details on front page say

"Now turn over to page one. Fold back the page".

Illustrate how this is to be done.

Say "This is a short practice test to let you see what you have to do".

Read the instructions preceding the first three examples and start the class on the first three examples only.

See that everyone is doing it correctly, putting the answer in the correct place etc.

Repeat for the other three sets of three examples on this page.

When this is completed say "Now turn over your books to Section I".

Read the instructions at the top of the page and start the class after which no assistance apart from that mentioned in paragraph 5 of the general instructions should be given.

At the end of 10 minutes say "Stop working. Put your pencils down".

When all the children have done so say "Now turn over to Section II. Fold back your books as you did last time and make sure that you are looking at Section II".

Check that they are looking at the correct page.

Read the instructions at the top of the page and start as before.

Carry through the rest of the test in the same way.

Time allowed for test	(a) Children working	80 minutes
	(b) Instructions	20 minutes
	Total	1 hr.40 minutes

Junior Arithmetic Test 1 B.

After filling up the details on the front page say

"This test is like the one you did on Monday but this time it is in only two sections.

"There are 4 pages in the first section and 3 pages in the second section.

"You are to work right through to the end of Section I and then you must stop until you are told to go on. In Section I there are addition sums, subtraction sums, multiplication sums and division sums. Be sure that you look at the top of each question to see what you have to do".

Make sure that this is understood.

Then say "Turn over to page 1".

Junior Arithmetic Test 1B (Continued)

Read the instructions at the top of the page and start the test.

At the end of 25 minutes say "Stop working. Put your pencils down."

Then say "Turn over to page 5."

Read the instructions at the top of the page and start the test.

At the end of 25 minutes say "Stop working. Put your pencils down."

Time allowed for test (a) Working Time	50 minutes
(b) Instructions	10 minutes
Total	1 hour

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Junior Arithmetic Test 1 C.

After filling up the details on the front page say "This test is exactly like the one you did on Wednesday but this time you must try to see how quickly you can do it."

"There are 4 pages in the first section and 3 pages in the second section. You are to work right through to the end of Section I and then you must stop until you are told to go on."

"Be sure to look at the top of each question to see what you have to do."

Make sure that this is clear.

Then say "Turn over to Page 1."

Read the instructions at the top of the page and start the test.

At the end of  $12\frac{1}{2}$  minutes say "Stop working. Put your pencils down."

Then say "Turn over to page 5."

Read the instructions at the top of the page and start the test.

At the end of  $12\frac{1}{2}$  minutes say "Stop working. Put down your pencils."

Time allowed for test (a) Working Time	25 minutes
(b) Instructions	10 minutes
Total	35 minutes



Junior Arithmetic Test 1 D.

After filling up the details on the front page say "This test has only one section in it. You are to work right through to the end of the test."

"The test consists of little problems. If you cannot do any questions after trying it, do not waste time on it. Leave it out and go on to the next question. Turn over to Page 1."

Read the instructions at the top of the page and start the test.

At the end of 25 minutes say "Stop working. Put down your pencils."

Time allowed for test	(a) Working Time	25 minutes
	(b) Instructions	10 minutes
	Total	35 minutes

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Series Test I

After filling in the details on the front say "Turn over to page 1. Fold back the page." Illustrate how this is to be done.

Read the instructions at the top of the page and then do the two examples with the class.

Take answers from the class. Use the board. In other words, teach them the first two examples.

Then read the instructions following these two examples, remind the class that they are to do only examples 1 - 10 and start the test.

After  $2\frac{1}{2}$  minutes say "Stop working. Put your pencils down."

"Now turn over to page 2." Make sure everyone is looking at page 2. Read the instructions at the top of the page, do the examples with the class as above, and start the test.

Watch that no pupil goes on to page 4.

After 15 minutes say "Stop working. Put your pencils down."

"Now turn over to page 4."

Read the instructions at the top of the page and do the two examples with the class as above. Remind the class that they are to do only questions 1 - 10. Start the test. After 5 minutes say "Stop working. Put your pencils down."

"Turn over to page 5." Make sure everyone is looking at page 5. Read the instructions at the top of the page, do the example with the class as above and start the test.

After 20 minutes say "Stop working. Put your pencils down."

Time allowed for test	(a) Working Time	$42\frac{1}{2}$ minutes
	(b) Instructions	$7\frac{1}{2}$ minutes
	Total	50 minutes

Junior Language Test 1

After filling in the details on the front page say "Turn over to page 1. Fold back your books." Illustrate how to fold back their books so that only page 1 is visible.

"Now look at this example. We have to find out which of the words in the brackets means the OPPOSITE of the word in heavy type. Now which word means the opposite of "long". Get the answer "short" from the class. "Yes, that is correct so we have underlined the word "short" in the brackets.

"The next four questions are the same sort of question. See if you can do them for yourselves. Begin."

Time - One Minute.

At the end of one minute say "Stop working. Put your pencils down".

"Now look at this example. This time we have to find out the word in the brackets which means the SAME as the word in heavy type. Now which word means the same as "large" ? Get the answer "big" from the class. "Yes, that is correct so we have underlined the word "big" in the brackets.

Now do the next four questions for yourself - Begin."

Time - One Minute.

At the end of one minute say "Stop working. Put your pencils down."

"Now look at this next example. In this case we have to find out which of the animals in the bracket BARKS. Now which animal barks ? " Get the answer "dog" from the class. "Yes, that is correct so we have underlined the word "dog" in the brackets.

Now do the next four questions for yourself. Do not turn over the page."

Time - One Minute.

At the end of one minute say "Stop working. Put your pencils down."

Then say "Now turn over your books to page 2." When all the children have done so say "You are to do all the questions on this page for yourself. You are told at the beginning of each set of questions what you are to do. Go straight on to the foot of the page and then look over your answers until you are told to stop."

Time - Three Minutes.

At the end of 3 minutes say "Stop working. Put your pencils down."

Then say "Turn over to page 3. You may leave your books open this time." Show the children what is meant.

Then say "You are now to do all the questions on pages 3 and 4 for yourselves. You are told at the beginning of each set of questions what you are to do. Go straight on to the foot of page 4 and then look over your answers until you are told to stop. Do not turn over to page 5."

Time - 9 Minutes.

At the end of 9 minutes say "Stop working. Put your pencils down."

Junior Language Test 1 (Continued)

After a short pause say "Now turn over to page 5 and fold your books back". Illustrate.

Read the instructions at the top of the page with the children and read the first story with them. Then read the instructions in black type after the story and set the class to answer the first four questions.

Time - 1 minute.

At the end of 1 minute say "Stop working. Put your pencils down."

Do the next two passages in the same way in each case reading the passage to the children. Time to answer questions in each case - one minute.

On completion of page 5 say "Turn over your books to Page 6." When all the children have done so say "You are now to read all the stories and answer all the questions on pages 6 - 10 for yourselves. Read each story and then answer the questions about it. Go right on to the foot of page 10 and then look over your answers until you are told to stop." Make sure that this is understood.

"You will have 20 minutes. Begin. "

At the end of 20 minutes say "Stop working. Put your pencils down."

Total time for administration	(a) Working time	38 minutes
	(b) Instructions	15 minutes
	Total	53 minutes

Junior Space Test 1

After filling in the details on the front page say "Turn over to page 1." Read the instructions at the top of the page with the children and at the end say "Remember there are two pages of drawings. Stop at the foot of page 2. You will have ten minutes. Now begin."

At the end of ten minutes say "Stop working, pencils down." Then say "Turn over to page 3."

Read over the instructions with them. Remind them that there are two pages of drawings and that they have to go on to the foot of page 4. Tell them they will have ten minutes and start the test.

At the end of ten minutes say "Stop working, pencils down."

Time for administration of test	(a) Working time	20 minutes
	(b) Instructions	10 minutes
	Total	30 minutes



Junior Space Test II

After filling up the details on the front page say "Turn over to page 1."

"The whole of this test has to do with cubes. A cube has six sides or faces."

Illustrate this with one of the unpainted cubes. "Now suppose that we place the two cubes A and B together as shown in the diagram and then paint the outside of the whole block."

Illustrate this by placing two unpainted cubes together as in the diagram and then replace them by two cubes painted on 5 sides with their two unpainted sides next to each other. (These should have been put together before and placed ready to hand).

"How many sides of cube A will be painted?" Get the class to answer. Take answers till you get a correct answer and then take the two cubes apart and show why the answer is correct. This point should be made quite clear. Put them together again and in the same way find how many sides of B will be painted.

Have the children fill in these answers in the brackets.

Then join the three unpainted cubes together saying "Suppose we join three cubes A B and C together and then paint the outside of the whole block (replace the unpainted block by three cubes, two painted on 5 sides and one on 4 sides)."

Answer for yourselves the three questions on your question paper.

After one minute take answers orally and illustrate the correct answers by taking the three cubes apart and showing why A and C are painted on 5 sides and B on 4 sides.

This whole page may be taught. Make sure that it is clear.

This will probably take about 15 minutes.

Then say "Turn over to page 2."

Read the instructions at the top of the page and start the test.

See that the children are going ahead.

Further instruction may be given to individual children only if it is found that they have failed to grasp the instructions. These may then be repeated.

After 20 minutes say. " Stop working. Put your pencils down."

Time allowed for test	(a) Working time	20 minutes
	(b) Instructions	20 minutes
	Total	40 minutes



Matrices

Distribute scoring forms and test books. Fill in details at top of scoring form.

Then say "Open your books at the first page. It is like this". Hold up the demonstration enlargement for the class to see. "At the top it says Set A and you have a column A on your scoring form. Point to column A on your scoring form. This picture is A1. You see what it is. The upper part is a pattern with a bit left out. Each of these bits below (point to each in turn) is the right shape to fit the space but they do not all complete the pattern. Number 1 (point to the bit and then to the pattern) is quite the wrong pattern. Numbers 2 and 3 are wrong - they fit the space but they are not the right patterns. What about number 6? It is the right pattern (illustrate that the pattern is the same as the pattern above) but it does not go all over. Put your finger on the one that is quite right". Notice carefully how this is done. Give further explanation if it is necessary and then say "Yes, number 4 is the right one so the answer to A1 is 4 - write 4 here against number 1 in column A on your scoring form. Do not turn over yet."

Wait for everyone to finish and then continue "On every page in your book there is a pattern with a bit left out. All you have to do each time is to choose which of the bits is the right one to complete the pattern. When you have found the right bit you write the number of it down on your scoring form against the number of the pattern. They are simple at the beginning and get harder as you go on. There is no catch. If you pay attention to the way the easy ones go, you will find the later ones less difficult. Try each in turn, right to the end of the book. Go at a steady pace. If you come to any question that you cannot do after trying it leave it out and go on to the next one. Leave out as few as possible. See how many you can get right. Put the answers to set A in the first column of your scoring form, put the answers to set B in the second column and so on. Now turn over to A 2 and do the next one. Do not go on to A 3."

When sufficient time has been allowed for them to write down the answer to A 2 say "The right one, of course, is number 5. See that you have written the figure 5 against number 2 in column A on your form. Go on like that right to the end of the test. You will have 40 minutes."

Supervision.

Mistakes occur in filling up the scoring form. See that each child has entered correctly on his form his own solutions to the first five problems. Help where necessary. Once the children have grasped the nature of the initial problems and the way in which to set down their answers give no further help.

Twenty minutes after the start of the test see that each child is still recording his choices against the correct numbers on his scoring form and assist where necessary. Urge abnormally slow children to be a little quicker.

Time for administration	(a) Working time	40 minutes
	(b) Instructions	15 minutes
	Total	55 minutes

Junior Intelligence TestPage 1.

After filling in details on the front page say to the children "To-day we are going to try to work out some very interesting little problems. We shall do some of them together, and then when you see how they are done you will do some for yourselves.

"Open your books at the first page. Fold back the page." Illustrate how this is to be done. "You will see at the top of the page an alphabet which you may use to help you to solve the little problems on that page.

"Look at it and make sure that you can read it.

"Now look at the first question. It is called (a).

"Read it." Have someone read it.

"What is the third letter of the alphabet?" - C

"What is the letter after that?" - D

"Yes. So we write a letter D in the brackets at the end of the line.

"Now look at the second question marked (b).

"What letter comes between K and M?

"Look at the alphabet above. Find the letter K. Now find the letter M. What letter comes between them? "L". So we write the letter L in the brackets at the end of the line.

"Now you try and do example (c) for yourselves."

Take answers orally and show how to get correct answer. Same with (d).

"Now see if you can do the next four questions for yourselves."

Time 3 minutes.

After 3 minutes say "Stop working. Put your pencils down."

"Now turn over to page 2".

"Look at example (a). It says

1, 4, 7, 10.

We have to find what would be the next number in the line and put it in the brackets."

Find orally the connection between 1 and 4, 4 and 7 and 7 and 10 and hence the answer to the question.

"Now look at example (b)." Do it in the same way as question (a).

"Now see if you can do the next six questions. Remember you have only to do questions 5 - 10 just now."

Time 3 minutes.

After 3 minutes say "Stop working. Put your pencils down."

"Now look at the next questions. You will see that we now have letters instead of numbers, and there is an alphabet printed to help you.

"Look at example (a).

"We have the three letters A, C and E, and we have to put in the brackets the next letter in the row."

Derive orally the answer to the question.

"Now look at example (b). You will notice that there are two letters in each group. See if you can get the answer for yourselves. Remember to put it in the brackets at the end of the line."

Check ~~this~~ answer with them.

"Now do questions 11 - 17 for yourselves. Remember to put the answer in the brackets."

Time  $3\frac{1}{2}$  minutes.

After  $3\frac{1}{2}$  minutes say "Stop working. Put your pencils down."

"Now turn over to page 3 and fold your books back in the same way as before." Illustrate.

"The next examples are in a sort of secret code.

"Let us look at the first one and see if we can find out what the code is.

"Question 1 says X R Y Z means COAT, and we have to find out what Z R means.

"If X R Y Z means COAT what does Z mean? What does R mean? So what does ZR mean? Yes, "to", so we underline the word "to" in the brackets at the end of the line.

"Now see if you can do question (b) for yourselves."

Go over it with them as above.

"Now do questions 18 - 22 for yourselves." Remember to ~~underline one of the words~~ ~~put your answers~~ in the brackets. Do not go past question 22."

Time 3 minutes.

After three minutes say "Stop working. Put your pencils down." Then say "Here are some more code questions, only this time each letter stands a number.

"Look and see what each letter is equal to. Now look at example (a). The number 231.

"What letter equals 2? What letter equals 3? What letter equals 1? So 231 equals BCA. So we put BCA in the brackets at the end of the line.

"Now look at example (b). Read it carefully and see if you can put in the answer."

Go over it with them.

"Now see if you can do examples 23 - 30 for yourself. Remember to read each example carefully and to put your answers in the brackets. Remember also to read the instructions between examples 25 and 26."

Time 4 minutes.

After 4 minutes say "Stop working. Put your pencils down."

"Now turn over to page 4"

"Look at the example (a). There you have a list of five words. Two of these words mean the opposite. What are they? Yes - "good and bad" so the words good and bad have been underlined.

"Now see if you can do example (b). Remember you are to pick out two words which mean the opposite and then you are to underline them."

Check that they know what to do.

"Now do the ones below for yourselves. Remember to underline the two words which mean the opposite of each other.

Time  $2\frac{1}{2}$  minutes.

After  $2\frac{1}{2}$  minutes say "Stop working. Put your pencils down."

"Look at example (a). A puppy is a little (or baby) dog. A kitten is a little (or baby) cat. So kitten has been underlined in the first bracket and cat has been underlined in the second.

"Now look at example (b). See if you can do it for yourself."

Check that the children understand the principle.

"Now do the ones below for yourself. Remember to underline two words in each answer, one word in each bracket."

Time  $3\frac{1}{2}$  minutes. After  $3\frac{1}{2}$  minutes say "Stop working. Put your pencils down."

"Turn over to page 5 and fold back your books as you did before." Illustrate.

"Read the story at the top of the page and then answer the questions below it. When you have answered these three questions go right on and answer the three questions below.

"Do not go on to the sums below.

Time  $3\frac{1}{2}$  minutes. After  $3\frac{1}{2}$  minutes say "Stop working. Put your pencils down."

"Now look at this sum." Put the sum on the board.

$$\begin{array}{r} . \ 8 \\ 2 \ . \\ \hline 4 \ 5 \end{array}$$

"It is a subtraction sum but some of the numbers have been missed out.

"You have to fill in the missing numbers. You put a number where there is a dot.

"Now what would you have to take from 8 to get 5?"



"Yes, "3". So we put in a 3.

"What would you have to take 2 from to get 4? Yes "6". So we put in a 6.

"Now you complete the three sums below in the same way."

Time  $3\frac{1}{2}$  minutes. After  $3\frac{1}{2}$  minutes say "Stop working. Put your pencils down."

"Turn over to page 6."

Go over with the children what it says below the square. "Now write in the brackets the correct answers to these questions."

Time  $2\frac{1}{2}$  minutes.

After  $2\frac{1}{2}$  minutes say "Stop working. Put your pencils down."

"Now turn over to page 7. You do not need to fold your book back this time.

"In this test you do not have to write anything at all. You just have to draw a line under the answer you choose.

"Look at the drawings at the top of the page. These are the same as I have on the blackboard." (Have on the blackboard a copy of the first three lines of the drawings on page 7 copied as accurately as possible.)

"The first two are like one another in some way, or maybe in more than one way, - and we have to find another like the third in exactly the same way as the first is like the second." (Point to each figure as mentioned.) "To make it easier we are given five answers and we have to choose the right one and draw a line under it.

"We'll do the first one together.

"Look at the first two, - a big square and a little square. We now have to find which one of these five (pointing) this third one is like (pointing) in just the same way as the first is like the second (pointing). A big square is to a little square as a big circle is to - which one do you think? - yes, a little circle. The first pair of drawings have the same shape you see (pointing) and the second is smaller than the first (pointing). We have to look then for one which has the same shape as this third drawing (pointing) and is smaller than it is. So we draw a line under the little circle to show that is the answer we have chosen.

"Now let us try the second one." (Point to each drawing as it is mentioned)

"The first drawing is a little circle with a dot. The second is a bigger circle and without a dot. The second one is bigger and has no dot. We now have to find a drawing which this one is like in just the same way - it must have the same shape - be bigger and have no dot, so we draw our line under this one. And so we can say a little circle with a dot is to a big empty circle as a little drawing like this with a dot is to a big empty drawing like this.

"Now try the third one. Look at the first two drawings. Do you see that the second is just the shaded part of the first one? Now we have to choose for our answer a drawing that will be like the third one in just the same way. This one is just like it. It is a shaded bit of the third one, so we draw a line under it to show we have chosen that as our answer.

"Now you are going to try some by yourselves. Remember to look at the first two little drawings carefully and decide how they go together. Then find one from the five answers which goes with the third drawing in the same way, and draw a line under it.

"If you make a mistake and want to change your answer, do not rub it out - draw a line through your first line like this (Do on blackboard) and then draw your new line under the answer you think is correct. You are to do all the questions on pages 7 and 8."

Time 7 minutes.

Watch that the children go on to page 8. Remind them to do so if they forget.

At the end of 7 minutes say "Stop working. Put your pencils down."

"Turn over to page 9 and fold over your books" (Illustrate). Read over the instructions at the top of the page with the children. After they have done examples 2 and 3 check their answers and make sure that they know what to do.

Then say "Now do the rest of the questions on this page for yourselves."

Time 5 minutes.

After 5 minutes say "Stop working. Put your pencils down."

"Turn over to page 10."

Read over the instructions at the top of the page with the children. Then say "Now do the rest of the questions on this page for yourselves."

Time 5 minutes. After 5 minutes say "Stop working. Put your pencils down."

"Turn over to page 11."

Read over the instructions at the top of the page with the children. Make sure they understand the names of the shapes and that they can see the three shapes in the diagram. Make sure that they see that the figure 9 is inside the circle only and that the figure 12 is inside the circle and oblong but outside the triangle.

Then say "Now do questions 95 - 100 for yourselves."

Time 3 minutes.

After 3 minutes say "Stop working. Put your pencils down."

Collect papers.

## MORAY HOUSE EXPERIMENTAL

## JUNIOR ARITHMETIC TEST I (A)

Fill in the following particulars at once :—

Your Surname.....  
(Use capital letters)

Your Christian Name(s).....  
(Use capital letters)

Sex (B. or G.).....

Name of your School.....

Class you are in.....

Your Age.....Years.

Date of your Birthday.....  
(Write the month as a word)

To-day's Date.....

Not to be filled in  
by Pupil

Age in years and completed  
months.

y. m.

Section	Score
1.	
2.	
3.	
4.	
TOTAL	
5.	
6.	
TOTAL	
GRAND TOTAL	
Signature of Teacher:	

# PRACTICE TEST

All the sums in the first row are addition sums. Do the three sums in this row and then put your pencil down. Now begin.

1.  
Add.

7

6

5

---



---

2.  
Add.

4 5 6

2 1 7

3 6 1

---



---

3.  
Add.

s. d.

5 6

4 2

---



---

All the sums in this row are subtraction sums. Do the three sums in this row and then put your pencil down. Now begin.

4.  
Subtract.

5 7 8

3 5 4

---



---

5.  
Subtract.

7 6 4

4 3 8

---



---

6.  
Subtract.

s. d.

6 8

3 2

---



---

All the sums in this row are multiplication sums. Do the three sums in this row and then put your pencil down. Now begin.

7.  
Multiply.

6

4

---



---

8.  
Multiply.

3 1

3

---



---

9.  
Multiply.

2 7

6

---



---

All the sums in this row are division sums. Do the three sums in this row and then put your pencil down. Now begin.

10.  
Divide.

8 4 by 4

11.  
Divide.

7 5 by 5

12.  
Divide.

9 9 2 by 3 1

DO NOT TURN OVER UNTIL YOU ARE TOLD



# SECTION ONE

All the sums in this section are addition sums. Remember to work as quickly and as carefully as you can. You will have 10 minutes for this section. Now begin.

1.	2.	3.	4.	5.
Add.	Add.	Add.	Add.	Add.
9	2 4	6 3	3 2 5	4 3 7
6	1 2	2 5	4 7 8	6
7	2 0	4 4	6 3 7	7 8
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>

6.	7.	8.	9.	10.
Add.	Add.	Add.	Add.	Add.
7 9 6 3	4 0 7 2	3 2 0 7	s. d.	s. d.
4 5 8	6 3 5 8	2 9	4 5	3 7
2 5 7 6	7 6 2 9	6 7 4	3 4	2 4
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>	s. d.	s. d.

11.	12.	13.	14.	15.
Add.	Add.	Add.	Add.	Add.
s. d.	s. d.	s. d.	s. d.	s. d.
4 1	8 7	2 3 $\frac{1}{2}$	3 1 $\frac{1}{2}$	9 7
3 3	3 1 1	1 6	2 5 $\frac{1}{2}$	5 8
5 4	4 6	3 4 $\frac{1}{2}$	6 1 0 $\frac{1}{2}$	7 6
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
s. d.	s. d.	s. d.	s. d.	£ : :

16.	17.	18.	19.	20.
Add.	Add.	Add.	Add.	Add.
£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1 2 3	3 9 4	1 2 6 8	1 4 6 9	2 5 0 0
3 4 2	4 6 6	9 1 8 4	5 1 0 $\frac{1}{2}$	1 4 6 8
2 3 4	5 7 1 1	1 4 7 5	1 2 1 4 8	1 2 1 0 4
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
: :	£ : :	£ : :	£ : :	£ : :

**DO NOT TURN OVER UNTIL YOU ARE TOLD**

# SECTION TWO

All the sums in this section are subtraction sums. Remember to work as quickly and as carefully as you can. You will have 10 minutes for this section. Now begin.

1.

Subtract.

68  
25

2.

Subtract.

43  
26

3.

Subtract.

55  
27

4.

Subtract.

67  
19

5.

Subtract.

528  
273

6.

Subtract.

509  
238

7.

Subtract.

603  
109

8.

Subtract.

4302  
1519

9.

Subtract.

6723  
495

10.

Subtract.

5634  
873

11.

Subtract.

s. d.  
6 8  
3 6

12.

Subtract.

s. d.  
7 10  
1 8

13.

Subtract.

s. d.  
6 4  
2 8

14.

Subtract.

s. d.  
14 3  
7 10

15.

Subtract.

s. d.  
5 6  
2 7  $\frac{1}{2}$

16.

Subtract.

£ s. d.  
12 9 7  
5 4 3

17.

Subtract.

£ s. d.  
11 7 5  
5 9 3

18.

Subtract.

£ s. d.  
12 14 5  
4 16 8

19.

Subtract.

£ s. d.  
25 0 0  
2 10 2

20.

Subtract.

£ s. d.  
16 12 9  
10 8 10

£ : :

£ : :

£ : :

£ : :

£ : :

DO NOT TURN OVER UNTIL YOU ARE TOLD

# SECTION THREE

All the sums in this section are multiplication sums. Remember to work as quickly and as carefully you can. You may put the working in the money sums in the space below them.

You will have 10 minutes for this section. Now begin.

1. Multiply. 9 6 _____	2. Multiply. 8 7 _____	3. Multiply. 7 9 _____	4. Multiply. 23 3 _____	5. Multiply. 97 8 _____
=====	=====	=====	=====	=====

6. Multiply. 785 6 _____	7. Multiply. 390 9 _____	8. Multiply. 412 23 _____	9. Multiply. 547 56 _____	10. Multiply. 467 80 _____
=====	=====	=====	=====	=====

11. Multiply. 978 69 _____	12. Multiply. s. d. 3 4 5 _____	13. Multiply. s. d. 2 3 6 _____	14. Multiply. s. d. 3 9 4 _____	15. Multiply. s. d. 5 7 8 _____
=====	s. d. =====	s. d. =====	s. d. =====	£ : : =====

16. Multiply. s. d. 2 11 4 _____	17. Multiply. s. d. 3 5 1/2 7 _____	18. Multiply. £ s. d. 1 3 5 8 _____	19. Multiply. £ s. d. 5 6 6 9 _____	20. Multiply. £ s. d. 3 12 6 7 _____
s. d. =====	£ : : =====	£ : : =====	£ : : =====	£ : : =====

DO NOT TURN OVER UNTIL YOU ARE TOLD

# SECTION FOUR

All the sums in this section are division sums. Remember to work as quickly and as carefully as you can. You will have  $12\frac{1}{2}$  minutes for this section. Now begin.

1.  
Divide.

4 5 by 5

2.  
Divide.

6 3 by 7

3.  
Divide.

5 6 by 8

4.  
Divide.

4 8 by 6

5.  
Divide.

2 5 5 by 5

6.  
Divide.

3 2 8 by 4

7.  
Divide.

5 6 7 by 9

8.  
Divide.

7 7 6 by 8

9.  
Divide.

5 0 4 by 6

10.  
Divide.

8 4 6 by 9

11.  
Divide.

2 4 8 2 by 7 3

12.  
Divide.

1 1 7 0 by 2 6

13.  
Divide.

2 9 6 1 by 4 7

14.  
Divide.

4 9 5 6 by 5 9

15.  
Divide.

4 7 4 0 by 6

16.  
Divide.

s. d.  
1 2 8 by 4

17.  
Divide.

s. d.  
1 6 3 by 5

18.  
Divide.

s. d.  
1 7 6 by 7

19.  
Divide.

£ s. d.  
9 1 5 6 by 3

20.  
Divide.

£ s. d.  
1 2 1 4 6 by

DO NOT TURN OVER UNTIL YOU ARE TOLD



# SECTION FIVE

Each of the sums in this section is a little problem. When you have found the answer to the question put it in the brackets at the end of the line. If you cannot answer any question after trying it, do not waste time on it. Go on to the next. You may do your working in the margin if you wish.

Remember to work as quickly and as carefully as you can. You will have  $12\frac{1}{2}$  minutes for this section. Now begin.

1. . . . . Add together 8, 7, 9. (.....)
2. . . . . Add together 6, 7, 12. (.....)
3. . . . . Subtract 9 from 15. (.....)
4. . . . . Subtract 29 from 47. (.....)
5. . . . . Multiply 9 by 7 and add 4 to the answer. (.....)
6. . . . . Divide 72 by 8. (.....)
7. . . . . What number multiplied by itself gives 36? (.....)
8. Jim had  $3\frac{1}{2}$ d. Tom had  $2\frac{1}{2}$ d. How much had they altogether? (.....d.)
9. Jean had 1s. to spend. She spent  $7\frac{1}{2}$ d. How much had she left? (.....d.)
10. . . . . What is the cost of 3 pencils at  $2\frac{1}{2}$ d. each? (.....d.)
11. . Three boys divide 1s. between them. How much does each get? (.....d.)
12. . . . . What is half of £1? (.....s.)
13. . . . . Multiply 25 by 8. (.....)
14. . . . . Multiply 30 by 12. (.....)
15. Tom has  $4\frac{1}{2}$ d. Jim has twice as much. How much has Jim? (.....d.)
16. Jean has 6d. Mary has twice as much as Jean. How much have they together? . . . . . (.....s. ....d.)
17. . . . . What is half of 2s. 6d.? (.....s. ....d.)
18. A boy spent 2s. 9d. on Monday, 3s. 6d. on Tuesday, and 5s. 3d. on Wednesday. How much did he spend altogether? . . . . . (.....s. ....d.)
19. A book contains 192 pages. If a boy reads 8 pages each day, how many days will it take him to read the book? . . . . . (..... days)
20. . . . . What is the cost of  $3\frac{1}{2}$  lb. of flour at 4d. per lb.? (.....s. ....d.)
21. . . . . What number divided by 8 gives 7? (.....)
22. . . . . Divide 460 by 20. (.....)
23. . . . . Divide 500 by 25. (.....)
24. . . . . What is the cost of 3 jerseys at 6s. 8d. each? (£.....:.....s. ....d.)
25. I gave John 84 stamps and James 5 times that number. How many stamps did I give away in all? . . . . . (.....stamps)

**DO NOT TURN OVER UNTIL YOU ARE TOLD**

# SECTION SIX

Each of the sums in this section is a little problem. When you have found the answer to a question put it in the brackets at the end of the line. If you cannot answer any question after trying it, do not waste time on it. Go on to the next. You may do your working in the margin if you wish.

Remember to work as quickly and as carefully as you can. You will have  $12\frac{1}{2}$  minutes for this section. Now begin.

1. . . . . Add together 6, 9, 4. (.....)
2. . . . . How many shillings are there in £1 ? (..... shillings)
3. . . . . How many half-crowns are there in £1 ? (..... half-crowns)
4. . . . . How many half-crowns are there in 12s. 6d. ? (..... half-crowns)
5. . . . . How many shillings are there in a guinea ? (..... shillings)
6. . . . . How many sixpences are there in 7s. 6d. ? (..... sixpences)
7. . . . Peaches cost 6d. each. How many can I get for 2s. 6d. ? (..... peaches)
8. . . . . What is the cost of eight  $1\frac{1}{2}$ d. stamps ? (.....s. ....)
9. . . . . How many pennies are there in £1 ? (..... pennies)
10. Tommy had 2s. 6d. to spend. He spent 1s. 2d. How much had he left ? (.....s. ....)
11. . . . . Add together 3519, 28, 645. (.....)
12. . . . . Subtract 745 from 1000. (.....)
13. . . . . Multiply 25 by 8 and add 7 to the answer. (.....)
14. There are in a picture house 325 men, 250 women, and 55 children.  
How many people are there altogether ? (..... people)
15. There are 56 people on a bus. If each buys a penny ticket how much  
will the conductor collect ? (.....s. ....)
16. . . . Apples cost 1s. 4d. per lb. How much will 4 lb. cost ? (.....s. ....)
17. In a school there are 9 classes with 38 children in each class. How  
many children are there in the school ? (..... children)
18. Two numbers when multiplied together give 84. One of the numbers  
is 12. What is the other ? (.....)
19. I buy one book costing 4s. 6d. and another costing 7s. 6d. How much  
change have I out of £1 ? (.....s. ....)
20. 6s. is divided between Tom and Harry so that Tom gets twice as  
much as Harry. How much does Tom get ? (.....)
21. . . . Plants are 6s. a dozen. How much will 3 plants cost ? (.....s. ....)
22. . . . I buy five  $2\frac{1}{2}$ d. stamps. How much change have I out of 2s. ? (.....)
23. . . . What is the cost of 1 dozen oranges at  $4\frac{1}{2}$ d. each ? (.....s. ....)
24. In a post office I bought two  $2\frac{1}{2}$ d. stamps and three  $1\frac{1}{2}$ d. stamps. How  
much change had I out of 1s. ? (.....)
25. . . . What is the cost of 8 lb. of salt at  $3\frac{1}{2}$ d. per lb. ? (.....s. ....)

**LOOK OVER YOUR WORK IN THIS SECTION  
UNTIL YOU ARE TOLD TO STOP**

**MORAY HOUSE EXPERIMENTAL**

**JUNIOR ARITHMETIC TEST I (B)**

**Fill in the following particulars at once :—**

Your Surname.....  
(Use capital letters)

Your Christian Name(s).....  
(Use capital letters)

Sex (B. or G.).....

Name of your School.....

Class you are in.....

Your Age..... Years

Date of your Birthday.....  
(Write the month as a word)

To-day's Date.....

**Not to be filled in by  
Pupil**

Age in years and completed  
months.

y. m.

Page	Score
1.	
2.	
3.	
4.	
TOTAL	
5.	
6.	
7.	
TOTAL	
GRAND TOTAL	
Signature of Marker:	

# SECTION ONE

Remember to look at the top of each question to see whether it says add, subtract, multiply or divide. Remember to work as quickly and as carefully as you can.

You will have 25 minutes for this test and you are to go right on to question 50 without waiting to be told. Now begin.

1.

Add.

6

8

5

---

2.

Add.

4 3

1 2

3 4

---

3.

Subtract.

7 6

5 3

---

4.

Subtract.

5 3

2 8

---

5.

Multiply.

7

6

---

6.

Multiply.

8

9

---

7.

Divide.

3 6 by 4

8.

Divide.

4 5 by 5

9.

Add.

7 4

6 8

3 5

---

10.

Add.

2 3 1

3 7 8

5 2 9

---

11.

Subtract.

8 3 7

4 7 3

---

12.

Subtract.

9 4 5

3 5 8

---

13.

Multiply.

3 2

3

---

14.

Multiply.

7 8

9

---

15.

Divide.

3 6 6 by 6

16.

Divide.

5 8 1 by 7

GO ON TO PAGE 2 WITHOUT WAITING TO BE TOLD



17.

Add.

4	5	0	6
	2	9	
7	0	8	

---



---

18.

Add.

s.	d.
3	4
5	6

---



---

19.

Subtract.

7	6	0	3
	6	3	8

---



---

20.

Subtract.

s.	d.
7	9
3	4

---



---

21.

Multiply.

4	2	3
	3	2

---



---

22.

Multiply.

6	5	8
	7	9

---



---

23.

Divide.

4 7 7 by 9

24.

Divide.

3 0 5 6 by 4

25.

Add.

s.	d.
3	4
4	2
7	5

---



---

26.

Add.

s.	d.
1	7
4	8
6	3

---



---

27.

Subtract.

s.	d.
1	2
	6
5	8

---



---

28.

Subtract.

s.	d.
1	3
	4
4	10

---



---

29.

Multiply.

s.	d.
2	6
	5

---



---

30.

Multiply.

s.	d.
1	5
	7

---



---

31.

Divide.

2 5 4 2 by 6 2

32.

Divide.

1 0 2 6 by 3 8

33.

Add.

s.	d.
5	3 $\frac{1}{2}$
2	6
9	7 $\frac{1}{2}$

s.	d.
----	----

34.

Add.

s.	d.
11	5
8	9
6	11

£	:	:
---	---	---

35.

Subtract.

s.	d.
12	5
6	8

s.	d.
----	----

36.

Subtract.

s.	d.
16	8
5	6 $\frac{1}{2}$

s.	d.
----	----

37.

Multiply.

s.	d.
4	7
	6

£	:	:
---	---	---

38.

Multiply.

s.	d.
11	8
	9

£	:	:
---	---	---

39.

Divide.

s.	d.
15	10 by 5

40.

Divide.

s.	d.
8	2 by 7

41.

Add.

£	s.	d.
1	15	7
2	8	9

£	:	:
---	---	---

42.

Add.

£	s.	d.
12	9	6 $\frac{1}{2}$
8	17	11

£	:	:
---	---	---

43.

Subtract.

£	s.	d.
14	6	7
2	9	8 $\frac{1}{2}$

£	:	:
---	---	---

44.

Subtract.

£	s.	d.
25	0	0
12	6	8

£	:	:
---	---	---

45.

**Multiply.**

s.	d.
5	3 $\frac{1}{2}$
	9

---

£ : :

46.

**Multiply.**

£	s.	d.
2	5	8
		8

---

£ : :

47.

**Divide.**

s.	d.
19	6 by 6

48.

**Divide.**

£	s.	d.
17	13	4 by 8

49.

**Add.**

£	s.	d.
14	16	11 $\frac{1}{2}$
5	18	7 $\frac{3}{4}$

---

£ : :

50.

**Subtract.**

£	s.	d.
12	8	7 $\frac{1}{2}$
4	11	9 $\frac{3}{4}$

---

£ : :

**END OF SECTION ONE****LOOK OVER YOUR ANSWERS UNTIL YOU ARE TOLD TO STOP****DO NOT TURN OVER TO PAGE 5****UNTIL YOU ARE TOLD**

## SECTION TWO

Each of the sums in this section is a little problem. When you have found the answer to the question put it in the brackets at the end of the line. If you cannot answer any question after trying it, do not waste time on it. Go on to the next. You may do your working in the margin if you wish.

Remember to work as quickly and as carefully as you can. You will have 25 minutes for this section. Now begin.

1. . . . . Add together 7, 6, 8. (.....)
2. . . . . Add together 5, 14, 9. (.....)
3. . . . . Subtract 8 from 17. (.....)
4. . . . . Subtract 19 from 43. (.....)
5. . . . What number multiplied by itself gives 49 ? (.....)
6. . . . . Divide 63 by 9. (.....)
7. Mary had  $4\frac{1}{2}$ d. in her purse and  $2\frac{1}{2}$ d. in her pocket. How much had she altogether ? . . . . . (.....d)
8. . . . . What is the cost of four  $1\frac{1}{2}$ d. stamps ? (.....d)
9. I buy an article costing  $5\frac{1}{2}$ d. How much change have I out of 1s. ? (.....d)
10. Two girls divide 2s. 6d. between them. How much does each get ? . . . . . (.....s. ....d)
11. . . . . What is half of 15s. ? (.....s. ....d)
12. . . . . Multiply 15 by 6. (.....)
13. . . . . Multiply 50 by 12. (.....)
14. I bought one book costing 5s. 6d., one costing 4s. 9d., and one costing 3s. 3d. How much did I spend altogether ? . . . . . (.....s. ....d)
15. Mabel has 1s. Mary has half as much as Mabel. How much has Mary ? . . . . . (.....d)
16. Dick has 8d. Tom has half as much as Dick. How much have they together ? . . . . . (.....s. ....d)

GO ON TO PAGE 6 WITHOUT WAITING TO BE TOLD



17. . . . . What is half of 3s. 6d. ? (.....s. ....d.)
18. . . . . What is a quarter of £1 ? (.....s. ....d.)
19. What is the cost of  $3\frac{1}{2}$  pounds of sugar at 5d. per pound ? (.....s. ....d.)
20. . . . A book costs 5s. How many can I get for £1 ? (..... books)
21. . . . . Divide 270 by 30. (.....)
22. Tom had 36 marbles. Jim had 4 times as many. How many  
had they together ? . . . . . (..... marbles)
23. . . . . Multiply 12 by 25. (.....)
24. . . . . What number divided by 9 gives 6 ? (.....)
25. . . . . Add together 12, 14, 25. (.....)
26. . . . . Subtract 25 from 42. (.....)
27. . . . . How many pennies are there in 10s. ? (..... pennies)
28. . . . . Add together 429, 148, 175. (.....)
29. . . . . Add together 2763, 39, 478. (.....)
30. . . . . Subtract 497 from 5000. (.....)
31. Margaret had 5s. to spend. She spent 3s. 6d. How much had  
she left ? . . . . . (.....s. ....d.)
32. There are in a school 275 boys, 325 girls, and 15 teachers. How  
many people are there altogether ? . . . . . (..... people)
33. 600 children are going for a bus ride. If each bus holds 30, how  
many buses will be needed ? . . . . . (..... buses)
34. Two numbers when multiplied together give 63. If one is 9  
what is the other ? . . . . . (.....)
35. . . . . Multiply 35 by 4 and add 9 to the answer. (.....)
36. Oranges cost 8d. per pound. How much will 5 pounds cost ? (.....s. ....d.)

TURN OVER TO PAGE 7 WITHOUT WAITING TO BE TOLD

37. . . . How many half-crowns are there in 17s. 6d. ? (.....half-crowns)
38. . . . How many sixpences are there in 10s. 6d. ? (..... sixpences)
39. . Pencils cost 2d. each. How many can I buy for 1s. 6d. ? (..... pencils)
40. I bought a shirt costing 10s. 6d. and a tie costing 3s. 6d. How much change had I out of £1 ? . . . . . (.....s. ....)
41. Eggs cost 3s. 6d. per dozen. What is the cost of one egg ? (.....)
42. Bananas cost 1s. per pound. If there are four bananas in a pound how much does one banana cost ? . . . . . (.....)
43. Tulip bulbs cost 5s. per dozen. How many can I buy for 2s. 6d. ? (..... bulb)
44. I bought three 2½d. and two 1½d. stamps. How much change had I out of 1s. ? . . . . . (.....)
45. A boy saves 6d. each week. How much will he save in 40 weeks ? (£..... : .....s. ....)
46. Tom and Jim have 12 marbles between them. If Tom has twice as many as Jim, how many marbles has Jim ? . . . . . (..... marbles)
47. I buy three articles costing 10s. each. How much change have I out of £5 ? . . . . . (£..... : .....s. ....)
48. . What is the cost of 3 pounds of meal at 6½d. a pound ? (.....s. ....)
49. If tea costs 3s. 4d. a pound, how much will half a pound cost ? (.....s. ....)
50. There are 540 children in a school of 12 classes. If each class is the same size, how many children are in each class ? (..... children)

**LOOK OVER YOUR ANSWERS IN THIS SECTION  
UNTIL YOU ARE TOLD TO STOP**

**MORAY HOUSE EXPERIMENTAL**

**JUNIOR ARITHMETIC TEST I (C)**

**Fill in the following particulars at once :—**

Your Surname.....  
(Use capital letters)

Your Christian Name(s).....  
(Use capital letters)

Sex (B. or G.).....

Name of your School.....

Class you are in.....

Your Age.....Years

Date of your Birthday.....  
(Write the month as a word)

To-day's Date.....

**Not to be filled in by  
Pupil**

Age in years and completed  
months.

y. m.

Page	Score
1.	
2.	
3.	
4.	
TOTAL	
5.	
6.	
7.	
TOTAL	
GRAND TOTAL	
Signature of Marker:	

# SECTION ONE

Remember to look at the top of each question to see whether it says add, subtract, multiply or divide. Remember to work as quickly and as carefully as you can. This test is to find out how quickly and carefully you can work.

You will have only  $12\frac{1}{2}$  minutes for this section. Now begin.

1.

Add.

7

4

5

2.

Add.

1 2

2 3

4 2

3.

Subtract.

8 7

4 2

4.

Subtract.

6 5

3 8

5.

Multiply.

7

9

6.

Multiply.

8

6

7.

Divide.

3 5 by 5

8.

Divide.

4 8 by 6

9.

Add.

6 8

4 7

3 5

10.

Add.

4 2 9

3 6 7

2 4 3

11.

Subtract.

7 4 5

3 6 2

12.

Subtract.

6 2 3

2 4 7

13.

Multiply.

3 1

4

14.

Multiply.

6 7

8

15.

Divide.

3 2 8 by 8

16.

Divide.

3 9 2 by 7

GO ON TO PAGE 2 WITHOUT WAITING TO BE TOLD



17.

Add.

3	6	0	3
	4	7	
9	7	0	

---



---

18.

Add.

s.	d.
4	2
5	7

---



---

s.	d.
----	----

19.

Subtract.

6	9	0	4
	8	4	9

---



---

20.

Subtract.

s.	d.
8	7
5	3

---



---

s.	d.
----	----

21.

Multiply.

2	4	3
	2	3

---



---

22.

Multiply.

7	9	4
	6	8

---



---

23.

Divide.

5 1 2 by 8

24.

Divide.

4 4 7 6 by 6

25.

Add.

s.	d.
2	3
7	5
5	2

---



---

s.	d.
----	----

26.

Add.

s.	d.
7	6
3	7
4	5

---



---

s.	d.
----	----

27.

Subtract.

s.	d.
1	1
5	8

---



---

s.	d.
----	----

28.

Subtract.

s.	d.
1	4
7	1

---



---

s.	d.
----	----

29.

Multiply.

s.	d.
3	8
	4

---



---

s.	d.
----	----

30.

Multiply.

s.	d.
1	7
	9

---



---

s.	d.
----	----

31.

Divide.

3 7 9 6 by 7 3

32.

Divide.

7 8 3 by 2 9

TURN OVER TO PAGE 3 WITHOUT WAITING TO BE TOLD

33.

Add.

s.	d.
4	7 $\frac{1}{2}$
3	5
7	6 $\frac{1}{2}$

s.	d.
----	----

34.

Add.

s.	d.
7	8
14	6
3	10

£	:	:
---	---	---

35.

Subtract.

s.	d.
13	3
8	7

s.	d.
----	----

36.

Subtract.

s.	d.
17	5
4	7 $\frac{1}{2}$

s.	d.
----	----

37.

Multiply.

s.	d.
5	7
	6

£	:	:
---	---	---

38.

Multiply.

s.	d.
12	4
	9

£	:	:
---	---	---

39.

Divide.

s.	d.
18	6 by 6

40.

Divide.

s.	d.
15	9 by 7

41.

Add.

£	s.	d.
3	14	8
2	8	7

£	:	:
---	---	---

42.

Add.

£	s.	d.
7	18	9
14	5	11 $\frac{1}{2}$

£	:	:
---	---	---

43.

Subtract.

£	s.	d.
18	4	5
5	8	7 $\frac{1}{2}$

£	:	:
---	---	---

44.

Subtract.

£	s.	d.
30	0	0
17	3	4

£	:	:
---	---	---

45.

**Multiply.**

s.	d.
4	5 $\frac{1}{2}$
	7

£	:	:
<hr/>		

46.

**Multiply.**

£	s.	d.
3	4	8
		9

£	:	:
<hr/>		

47.

**Divide.**

s.	d.
17	4 by 8

£	:	:
<hr/>		

48.

**Divide.**

£	s.	d.
19	8	6 by 9

49.

**Add.**

£	s.	d.
15	14	9 $\frac{3}{4}$
12	9	11 $\frac{1}{2}$

£	:	:
<hr/>		

50.

**Subtract.**

£	s.	d.
17	9	4 $\frac{1}{2}$
8	12	7 $\frac{3}{4}$

£	:	:
<hr/>		

**END OF SECTION ONE****LOOK OVER YOUR WORK UNTIL YOU ARE TOLD TO STOP**

**DO NOT TURN OVER TO PAGE 5  
UNTIL YOU ARE TOLD**

## SECTION TWO

Each of the sums in this section is a little problem. When you have found the answer to a question put it in the brackets at the end of the line. If you cannot answer any question after trying it, do not waste time on it. Go on to the next. You may do your working in the margin if you wish.

Remember to work as quickly and as carefully as you can. This test is to find out how quickly and carefully you can work. You will have  $12\frac{1}{2}$  minutes for this section. Now begin.

1. . . . . Add together 9, 5, 7. (.....)
2. . . . . Add together 15, 7, 6. (.....)
3. . . . . Subtract 9 from 16. (.....)
4. . . . . Subtract 17 from 35. (.....)
5. . . . What number multiplied by itself gives 64 ? (.....)
6. . . . . Divide 56 by 8. (.....)
7. . . . What is the cost of six  $1\frac{1}{2}$ d. pencils ? (.....)
8. Jim had  $3\frac{1}{2}$ d. John had  $5\frac{1}{2}$ d. How much had they altogether ? (.....)
9. . . . What is half of 13s. ? (.....s. ....)
10. My car fare is  $2\frac{1}{2}$ d. How much change will I get out of 1s. ? (.....)
11. I bought three presents. One cost 3s. 9d., the second one cost 4s. 6d., and the third one cost 6s. 3d. How much did I spend altogether ? (.....s. ....)
12. . . . . Multiply 14 by 5. (.....)
13. . . . . Multiply 40 by 12. (.....)
14. . . . . What is half of 1s. 6d. ? (.....)
15. Tom has 2s. 6d. Dick has half as much. How much has Dick ? (.....s. ....)
16. Mary has 1s. Mabel has half as much. How much have they together ? (.....s. ....)

GO ON TO PAGE 6 WITHOUT WAITING TO BE TOLD



17. . . . . Add together 13, 35, 16. (.....)
18. . . . . Add together 537, 258, 374. (.....)
19. . . . . Add together 249, 27, 5468. (.....)
20. . . . . Subtract 347 from 1000. (.....)
21. . . . What is the cost of five cakes at  $3\frac{1}{2}$ d. each ? (.....s. ....d.)
22. . . . What is the cost of  $3\frac{1}{2}$  lb. of salt at 4d. per lb. ? (.....s. ....d.)
23. . . . . Multiply 8 by 25. (.....)
24. . . . . Divide 280 by 40. (.....)
25. . . . . What number divided by 7 gives 9 ? (.....)
26. . . . How many 2s. 6d. stamps can I get for £1 ? (..... stamps)
27. . . . . How many pennies are there in £1 ? (..... pennies)
28. There are 560 children in a school. If each classroom holds 40 children how many classrooms will be required ? (..... classrooms)
29. Mary was given a present of 7s. 6d. She spent 3s. 3d. How much had she left ? (.....s. ....d.)
30. I have 27 British stamps, 275 American stamps, and 305 others. How many stamps have I altogether ? (..... stamps)
31. A pencil cost  $1\frac{1}{2}$ d. and a rubber costs  $2\frac{1}{2}$ d. What is the cost of 5 pencils and 5 rubbers ? (.....s. ....d.)
32. Dick had 25 cigarette cards. Tom had three times as many. How many had they altogether ? (..... cards)
33. Two numbers when multiplied together give 54. One is 6. What is the other ? (.....)
34. . . . Multiply 26 by 5 and add 7 to the answer. (.....)
35. . . . What is the cost of five rulers at 3d. each ? (.....s. ....d.)

**TURN OVER TO PAGE 7 WITHOUT WAITING TO BE TOLD**

36. I bought three books. One cost 10s. 6d., the second one cost 8s. 6d., and the third 5s. 6d. How much change had I out of £2 ? . . . . . (.....s. ....)
37. . . . . Peaches are 9d. each. How much will one dozen cost ? (.....s. ....)
38. I bought 3 collars at 2s. 6d. each. How much change had I out of £1 ? . . . . . (.....s. ....)
39. A boy saves 1s. per week. How long will it take him to save £1 ? (..... wee)
40. . . . . Cakes cost 2s. 6d. per dozen. How much will 3 cost ? (.....)
41. What is the cost of half a pound of coffee at 2s. 10d. per pound ? (.....s. ....)
42. . . . . How many  $1\frac{1}{2}$ d. stamps can I get for 1s. ? (..... stam)
43. I bought three shirts for £1. 11s. 6d. Each cost the same. How much did each cost ? . . . . . (.....s. ....)
44. 20 cigarettes cost 3s. 4d. How much does each cigarette cost ? (.....)
45. Mary and Margaret had 15 sweets between them, but Mary had only half as many as Margaret. How many sweets had Margaret ? . . . . . (..... swee)
46. I buy four ties at 3s. 6d. each. How much change have I out of £1 ? . . . . . (.....s. ....)
47. What will be the cost of 3 articles at 4s. 6d. each and 3 articles at 5s. 6d. each ? . . . . . (£..... : .....s. ....)
48. Oranges cost 8d. per pound. If 4 oranges weigh 2 pounds, how much does each orange cost ? . . . . . (.....)
49. 300 people go to a picture house. 100 pay 2s. each to get in. The rest pay 1s. each. How much do they pay altogether ? (£..... : .....s. ....)
50. 10s. 6d. is divided equally among three boys. How much does each get ? . . . . . (.....s. ....)

**LOOK OVER YOUR ANSWERS IN THIS SECTION  
UNTIL YOU ARE TOLD TO STOP**

**MORAY HOUSE EXPERIMENTAL**

**JUNIOR ARITHMETIC TEST I (D)**

**Fill in the following particulars at once :—**

Your Surname.....  
(Use capital letters)

Your Christian Name(s).....  
(Use capital letters)

Sex (B. or G.).....

Name of your School.....

Class you are in.....

Your Age.....Years

Date of your Birthday.....  
(Write the month as a word)

To-day's Date.....

**Not to be filled in  
by Pupil**

Age in years and completed  
months

y. m.

Page	Score
1.	
2.	
3.	
TOTAL	
Signature of Marker :	

Each of the sums in this section is a little problem. In most of them you will have to try to imagine what is described. This will help you to find the answer. When you have found the answer to the question put it in the brackets at the end of the line. If you cannot answer a question after trying it do not waste time on it. Go on to the next. You may do your working in the margin if you wish.

Work as carefully as you can. You will have 30 minutes for this test.

Now begin.

1. If there are 10 rows of people with 9 people in each row, how many people are there altogether? . . . . . (..... people)
2. In a picture house there are 8 seats in each row. If there are 72 people at a show how many rows will be filled? . . . (..... rows)
3. A queue is made up of 20 rows of people. If there are 60 people in the queue how many are in each row? . . . (..... people)
4. Two bricks each 9 inches long are placed end to end. What is their total length? . . . . . (.....ft. ....in.)
5. Two pieces of wood, one 2 feet 6 inches long and the other 5 feet 3 inches long, are placed end to end. What is their total length? . . . . . (.....ft. ....in.)
6. Three pieces of wood each 1 ft. 6 in. long are placed end to end. What is their total length? . . . . . (.....ft. ....in.)
7. A boy was 3 ft. 10 in. tall when he came to school. Now he is 4 ft. 2 in. tall. How much has he grown? . . . . . (..... in.)
8. A boy can hop 4 ft. 6 in., step 3 ft. and jump 7 ft. 6 in. How far will he get with a hop, step and jump? . . . (.....ft. ....in.)
9. If 20 bricks each 3 in. thick were placed on top of each other, how high would the pile be? . . . . . (.....ft. ....in.)
10. A brick is 9 in. long. What is the length of 6 bricks laid end to end? . . . . . (.....ft. ....in.)
11. A large letter T is formed by placing a piece of wood 2 ft. long and 3 in. wide across the top of another piece of wood 2 ft. 9 in. long and 3 in. wide. What is the total height of the T? . . . . . (.....ft. ....in.)
12. A piece of string is 3 ft. long. How many pieces of string each 6 in. long can I get out of it? . . . . . (..... pieces)

GO ON TO PAGE 2 WITHOUT WAITING TO BE TOLD

13. A boy has to walk 100 yards along a straight road to school.  
One morning he goes 25 yards down a side street and back  
to fetch his friend. How far does he walk to school ? (..... yards)
- A park is 100 yards long and 100 yards wide.
14. A person walks straight across it from one side to the other.  
How far does he walk ? (..... yards)
15. Another person walks once right round the park. How far does  
he walk ? (..... yards)
16. Motor cars are 12 ft. long. If 20 motor cars are standing in a  
line behind each other how far will they stretch ? (..... yards)
17. A penny measures 1 in. across. How many pennies laid touch-  
ing each other will it take to stretch 10 yards ? (..... pennies)
18. I have three books each 2 in. thick, and six books each 3 in.  
thick. How long a shelf shall I require in my bookcase to  
hold them ? (.....ft. ....in.)
19. A train 90 yards long is made up of trucks each 9 ft. long. How  
many trucks are in the train ? (..... trucks)
20. One person takes up 1 ft. 6 in. on a seat. How many can sit  
on a seat 9 ft. long ? (..... people)
21. My garden is 50 yards long and 25 yards wide. If I walk once  
round it how far do I walk ? (..... yards)
22. Pipes are laid down in pieces 6 ft. long. How many pieces  
will it require to lay a pipe 20 yards long ? (..... pieces)
23. I put three boxes on top of each other. The first box is 4 ft. 6 in.  
high, the second 3 ft. 9 in. high and the third 2 ft. 3 in. high.  
How high is the pile of boxes ? (.....ft. ....in.)
24. A room is 20 ft. long. A carpet in the room is 16 ft. long. If the  
carpet touches the wall at one end how much space will there  
be between the carpet and the wall at the other end ? (.....ft.)
25. If the carpet is in the middle of the floor how much space will  
there be at each end ? (.....ft.)
26. A garden path is 10 ft. long and 3 ft. wide. How many blocks  
of stone 1 ft. long and 1 ft. wide will be required to pave it ? (..... blocks)

TURN OVER TO PAGE 3 WITHOUT WAITING TO BE TOLD



27. A picture is 15 in. long and 9 in. wide. How much black tape will be required to put a border round it ? (.....ft. ....in.)
28. I walk 100 yards north, then 100 yards east and then 100 yards south. How far am I from my starting point ? (.....yard)
29. Betty is 3 ft. 6 in. tall while Margaret is 4 ft. 6 in. tall. Joan is exactly half-way between the two. How tall is Joan ? (.....ft. ....in.)
- A wall 30 ft. long and 10 ft. high is built of bricks 1 ft. long and 3 in. deep.
30. How many bricks laid end to end will there be in one row ? (.....brick)
31. How many rows of bricks will there be laid one on top of the other ? (.....row)
32. How many bricks will there be in the wall ? (.....brick)
- I have an empty box 12 in. long, 6 in. wide and 10 in. deep, and I start to fill it with little wooden cubes 1 in. long, 1 in. wide and 1 in. deep.
33. How many cubes will I be able to put in one row of the bottom layer ? (.....cube)
34. How many rows will there be in the bottom layer ? (.....row)
35. How many cubes will there be in the bottom layer ? (.....cube)
36. How many layers will there be when the box is filled ? (.....layer)
37. How many cubes will it take to fill the box ? (.....cube)
- A parcel is 12 in. long, 9 in. wide and 6 in. deep.
38. What length of string will it take to go once round it lengthwise ? (.....ft. ....in.)
39. What length of string will it take to go once round it across the middle ? (.....ft. ....in.)
40. What length of string will it take to go once round it each way ? (.....ft. ....in.)

**LOOK OVER YOUR WORK UNTIL TIME IS UP**

# JUNIOR INTELLIGENCE TEST

Fill in the following particulars at once :—

Your Surname.....  
(Use capital letters)

Your Christian Name(s).....  
(Use capital letters)

Sex (B. or G.).....

Name of your School.....

Class you are in.....

Your Age.....Years

Date of your Birthday.....  
(Write the month as a word)

To-day's Date.....

Not to be filled in by Pupil	
Age in years and completed months	
y.	m.
Page	Score
1.	
2.	
3.	
4.	
5.	
6.	
TOTAL	
7.	
8.	
9.	
10.	
11.	
TOTAL	
GRAND TOTAL	
Signature of Marker:	

# SECTION ONE

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

(a) Write the letter which comes after the third letter of the alphabet.

Put your answer in the brackets . . . . . (.....D.....)

(b) Which letter comes in the alphabet between K and M? . . . . . (.....L.....)

(c) Which letter in the word **EXAMPLE** comes nearest to Z in the alphabet? . . . . . (.....)

(d) Write the letter of the alphabet which ends the second month of the year . . . . . (.....)

Now see if you can do the next four questions.

1. Write the letter which comes most often in the word **INNKEEPER**. (.....)

2. Write the two letters which come least often in the word **NINETEEN**. (.....)

3. One month of the year begins with the letter which comes just before G in the alphabet. Write the last letter of this month . . . . . (.....)

4. Write the letter which begins the names of three months of the year. (.....)

**LOOK OVER YOUR ANSWERS UNTIL YOU ARE TOLD TO STOP**

(a) 1, 4, 7, 10 . . . . . (.....)

(b) 13, 11, 9, 7 . . . . . (.....)

Now see if you can do the next six questions.

5. 17, 14, 11, 8 . . . . . (.....)

6. 2, 4, 8, 16 . . . . . (.....)

7. 27, 36, 45, 54 . . . . . (.....)

8. £1, 18s., 16s., 14s. . . . . (..... s.)

9. 2s. 6d., 3s., 3s. 6d., 4s. . . . . (.....s.....d.)

10. 2½d., 4d., 5½d., 7d. . . . . (..... d.)

Look over your answers until you are told to stop

---

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

---

(a) A, C, E . . . . . (.....)

(b) XL, XM, XN . . . . . (.....)

Now do the next seven questions.

11. A, D, G . . . . . (.....)

12. H, L, P . . . . . (.....)

13. N, L, J . . . . . (.....)

14. AA, BB, CC . . . . . (.....)

15. AB, BC, CD . . . . . (.....)

16. BC, BD, BE . . . . . (.....)

17. OS, PS, QS . . . . . (.....)

Look over your answers until you are told to stop

**DO NOT TURN OVER TO THE NEXT PAGE UNTIL YOU ARE TOLD**

(a) If XRYZ means COAT, ZR means . . . . . ( it | at | to | as | so

(b) If SBD means PUT, BS means . . . . . ( be | as | is | up | so

Now do these questions :—

18. If RNO means MAN, NR means . . . . . ( an | ma | no | or | am

19. If ROS means SIT, OR means . . . . . ( in | us | it | is | or

20. If IKSH means MEAT, HKS means . . . . . ( his | ate | has | tea | eat

21. If GXRM means BOAT, GRM means . . . . . ( gum | tab | gem | meg | bat

22. If PNWR means SNAG, RWP means . . . . . ( rap | gas | gap | sag | rat

Look over your work until you are told to stop

A is equal to 1. B is equal to 2. C is equal to 3 ; that is A=1, B=2, C=3.

(a) Write in letters the number 231 . . . . . (..... BCA

(b) Add B and C. Write the answer as a number . . . . . (.....

Now do these questions :—

23. Take B away from C. Write the answer as a letter . . . . . (.....

24. Divide C by A. Write the answer as a number . . . . . (.....

25. Multiply B by A. Write the answer as a letter . . . . . (.....

In the same way if A is equal to 1, B is equal to 2, C is equal to 4, D is equal to 7, E is equal to 11 ; that is A=1, B=2, C=4, D=7, E=11.

26. What two letters multiplied together will make 77 ? . . . . . (..... and

27. What two letters multiplied together will make 2 ? . . . . . (..... and

28. What two letters multiplied together will make 14 ? . . . . . (..... and

29. What two letters divided by one another will make 2 ? . . . . . (..... and

30. What two letters divided by one another will make 7 ? . . . . . (..... and

Look over your work until you are told to stop

DO NOT TURN OVER TO THE NEXT PAGE UNTIL YOU ARE TOLD



Look at these examples :—

(a) ( good | pretty | few | bad | wrong )

(b) ( clear | day | bright | fine | night )

Now do the ones below for yourself. Remember to underline the two words which mean the opposite of each other.

31. . . . . ( find | appear | lose | look | see )

32. . . . . ( army | stormy | peace | friendly | war )

33. . . . . ( spring | dew | morning | evening | stars )

34. . . . . ( rough | shine | fair | smooth | pretty )

35. . . . . ( up | near | down | high | over )

Look over your work until you are told to stop

Now look at these examples :—

(a) Puppy is to Dog as . ( kitten | lamb | sheep ) is to ( lion | cat | fox )

(b) Apple is to Fruit as ( robin | cow | lettuce ) is to ( vegetable | horse | nest )

Now do the ones below for yourself. Remember to underline two words in each answer, one word in each of the brackets.

36. Aeroplane is to Air as . ( train | boat | motor car ) is to ( water | sky | clouds )

37. Stocking is to Foot as . ( jacket | scarf | glove ) is to ( hand | finger | arm )

38. Boy is to Girl as . ( uncle | man | brother ) is to ( maid | woman | mother )

39. Ankle is to Foot as . ( arm | elbow | wrist ) is to ( thumb | finger | hand )

40. Halfpenny is to Penny as  
( sixpence | threepenny bit | farthing ) is to ( pound | florin | shilling )

41. Nose is to Smell as . ( face | eye | head ) is to ( see | taste | feel )

42. Beef is to Cow as . ( dinner | pork | cheese ) is to ( pig | horse | fish )

Look over your work until you are told to stop

**DO NOT TURN OVER TO THE NEXT PAGE UNTIL YOU ARE TOLD**



Look at this square :—

	Columns		
	1	2	3
Row X	S	E	Q
Row Y	E	A	R
Row Z	A	T	A

In this square the rows read across. The rows are named X, Y and Z.

For example the first row **SEQ** is called Row X.

A column reads up and down. The columns are named 1, 2 and 3.

For example the first column **SEA** is called Column 1.

Now write in the brackets the correct answers to these questions.

56. Which letter comes most often inside the square ? . . . (.....)
57. What is the name of the column which does not form a word when read downwards ? . . . (.....)
58. What is the name of the row which forms a word ? . . . (.....)
59. What is the name of the column which has not the letter E in it ? . . . (.....)
60. Write the word formed by the letters in column 2 . . . (.....)

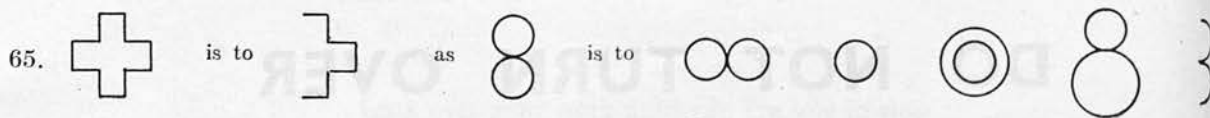
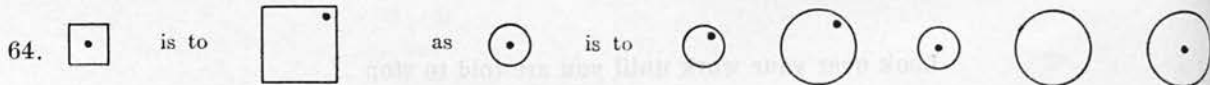
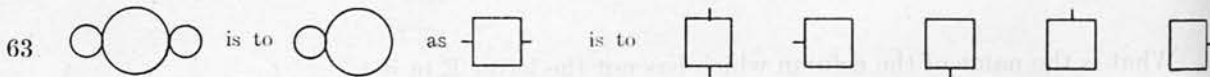
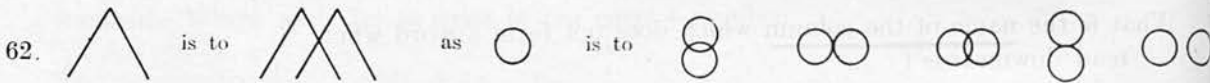
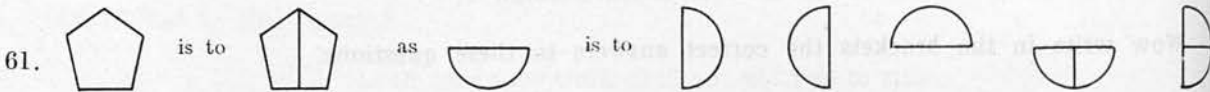
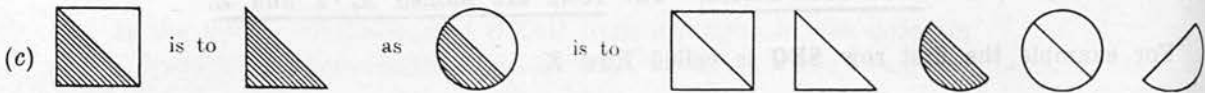
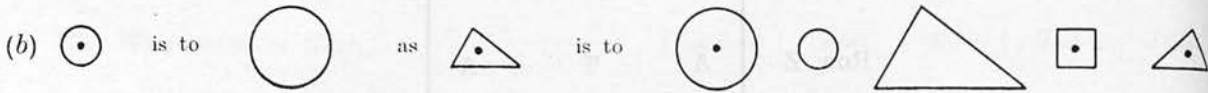
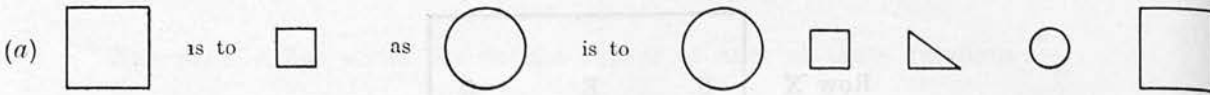
Look over your work until you are told to stop

END OF SECTION ONE

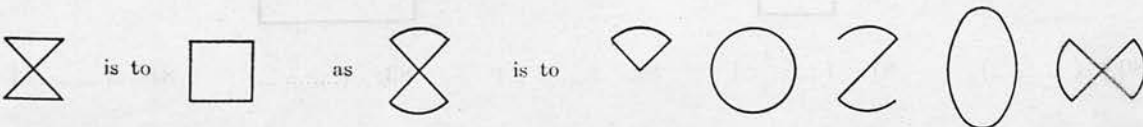
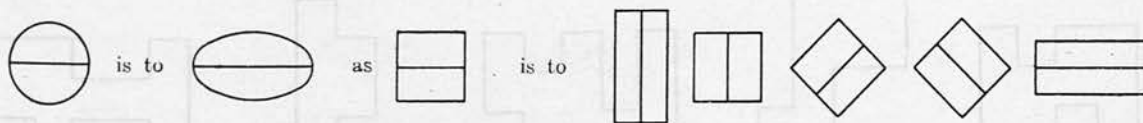
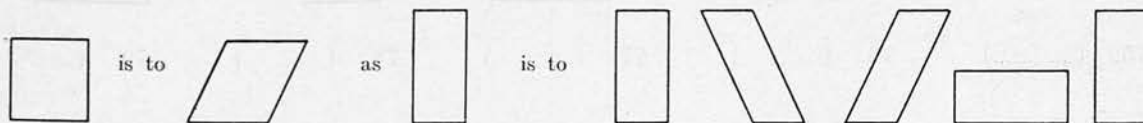
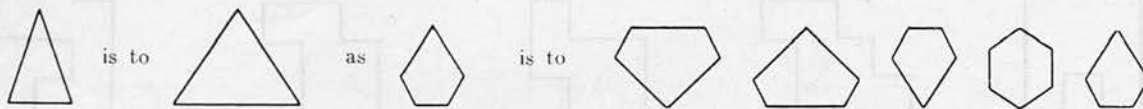
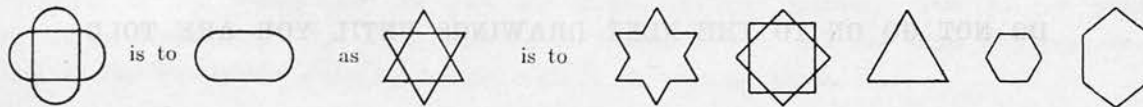
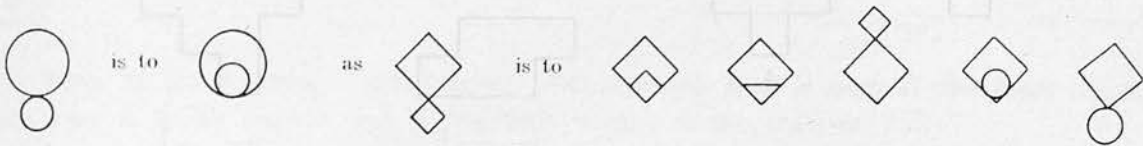
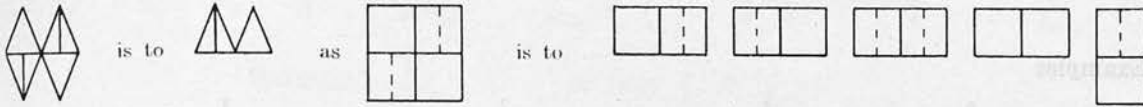
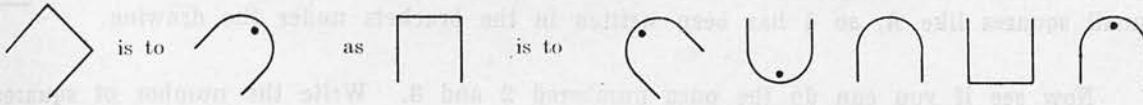
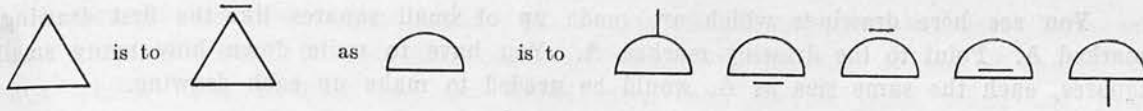
**DO NOT TURN OVER  
UNTIL YOU ARE TOLD**

## SECTION TWO

## Examples



GO STRAIGHT ON TO THE NEXT PAGE



Look over your work until you are told to stop

**DO NOT TURN OVER TO THE NEXT PAGE UNTIL YOU ARE TOLD**

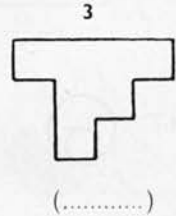
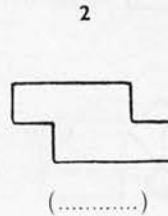
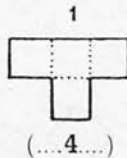


You see here drawings which are made up of small squares like the first drawing marked A. Point to the drawing marked A. You have to write down how many small squares, each the same size as A, would be needed to make up each drawing.

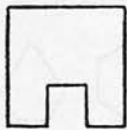
Look at the examples. Point to the one numbered 1. It is made up from four small squares like A, so 4 has been written in the brackets under the drawing.

Now see if you can do the ones numbered 2 and 3. Write the number of squares in the brackets. Do not try any more just now.

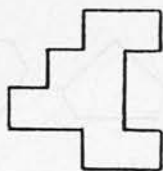
### Examples



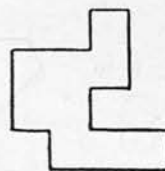
DO NOT GO ON TO THE NEXT DRAWINGS UNTIL YOU ARE TOLD



75. (.....)



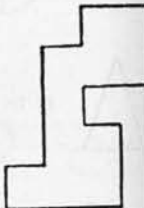
76. (.....)



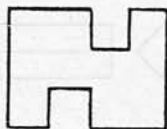
77. (.....)



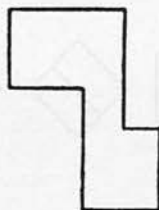
78. (.....)



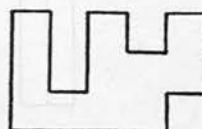
79. (.....)



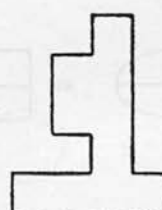
80. (.....)



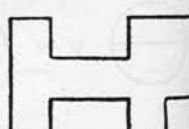
81. (.....)



82. (.....)



83. (.....)



84. (.....)

Look over your answers until you are told to stop

DO NOT GO ON TO THE NEXT PAGE UNTIL YOU ARE TOLD

Underneath the seven large letters which you see below—point to them—there are small drawings. Point to them too. Each of these small drawings is part of one of the large letters. You have to find out which letter each part is taken from, and write this letter for your answer in the brackets under each little drawing.

A H K M N Y Z

Example  Answer (...A...)

Look at the example. Point to it. You can see it is a part of the letter A, so the letter A is the answer, and A has been written in the brackets.

Some of the letters may be used for more than one answer. You do not need any other letters than the seven big letters printed above, and the little drawings are parts of the big letters standing upright exactly as you see them.



85. (.....)



86. (.....)



87. (.....)



88. (.....)



89. (.....)



90. (.....)



91. (.....)



92. (.....)



93. (.....)



94. (.....)

Look over your work until you are told to stop

DO NOT TURN OVER TO THE NEXT PAGE UNTIL YOU ARE TOLD

Look at these drawings, their names are printed beneath them.



CIRCLE

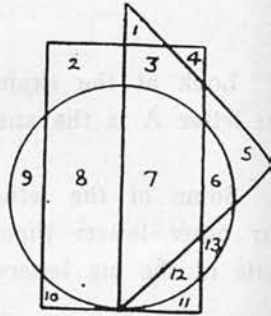


OBLONG



TRIANGLE

Now look at this drawing. The three shapes—the circle, the oblong and the triangle—have been printed on top of one another so that 13 different spaces have been made. They are numbered from 1 to 13. Some of the numbers are inside all three shapes—inside the circle, inside the oblong and inside the triangle; other numbers are inside two shapes; and others are inside one shape only. For example, the number 9 is inside the circle only—it is outside the triangle and it is outside the oblong. Look now at number 12. It is inside both the circle and the oblong, but it is outside the triangle.



Now write in the brackets your answers to these questions :—

95. Which are the two numbers inside the circle but outside the oblong and triangle ? . . . . . ( : )
96. Which are the two numbers inside the triangle but outside the circle and oblong ? . . . . . ( : )
97. Which number is inside the circle, the oblong and the triangle ? . . . . . ( : )
98. Which number is inside the triangle and oblong but outside the circle ? . . . . . ( : )
99. How many numbers are there inside the circle ? . . . . . ( : )
100. How many numbers are there inside the oblong but outside the circle and triangle ? . . . . . ( : )

**LOOK OVER YOUR WORK UNTIL YOU ARE TOLD TO STOP**

PATTERNS (MATRIX) TEST

Your Surname.....

Your Christian Names.....

Your School.....

Your Class.....

---

A	B	C	D	E
1.....	1.....	1.....	1.....	1.....
2.....	2.....	2.....	2.....	2.....
3.....	3.....	3.....	3.....	3.....
4.....	4.....	4.....	4.....	4.....
5.....	5.....	5.....	5.....	5.....
6.....	6.....	6.....	6.....	6.....
7.....	7.....	7.....	7.....	7.....
8.....	8.....	8.....	8.....	8.....
9.....	9.....	9.....	9.....	9.....
10.....	10.....	10.....	10.....	10.....
11.....	11.....	11.....	11.....	11.....
12.....	12.....	12.....	12.....	12.....

Score.....

Moray House Experimental

204

Junior Space Test 1

Fill in the following particulars:

Your Surname.....

Your Christian Name(s).....

Sex ( B or G ) .....

Name of your School.....

Class you are in.....

Your Age.....years

Date of your Birthday.....

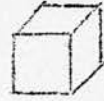
Today's Date.....

Not to be filled in by the pupil	
Age in years and completed months	
y. m.	
Page	Score
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Total	
Signature of Marker	

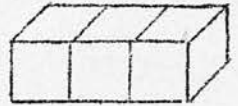


The drawings on this page are made up of little blocks. You have to find out how many blocks are in each drawing. You may not be able to see the blocks at the back of some of the drawings. If you think there are blocks at the back of a drawing to hold up the blocks on top you must count them too.

This is the size of each block.



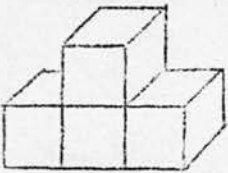
In this drawing there are three blocks so we have written a 3 in the brackets under under the drawing.



( 3 )

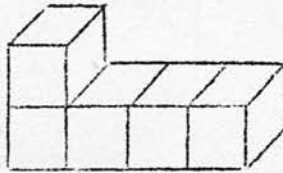
Now count the number of blocks in each drawing and write the number in the brackets under each drawing.

(1)



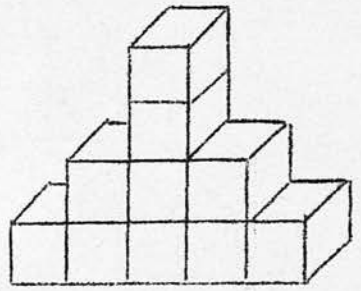
(   )

(2)



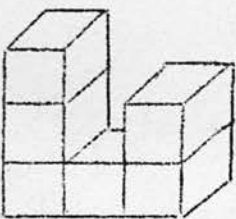
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(3)



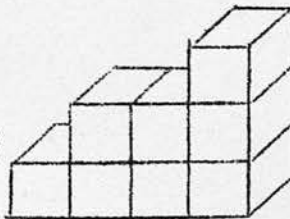
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(4)



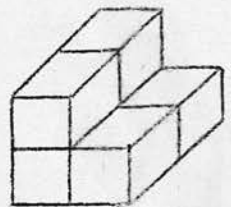
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(5)



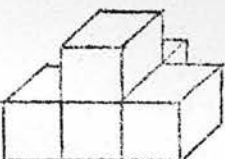
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(6)



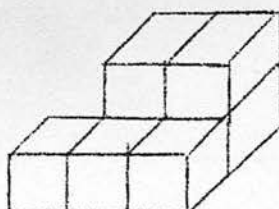
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(7)



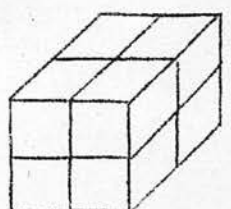
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(8)

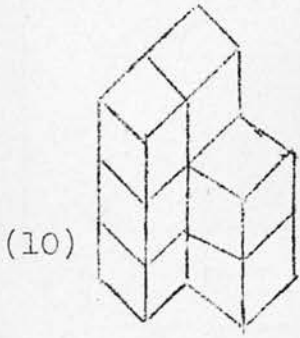


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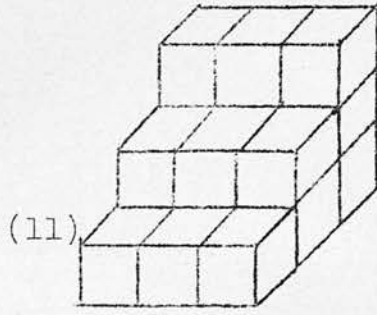
(9)



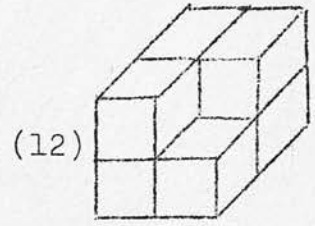
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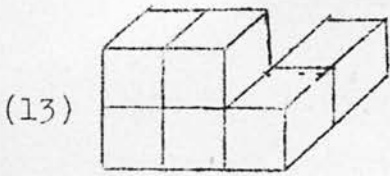
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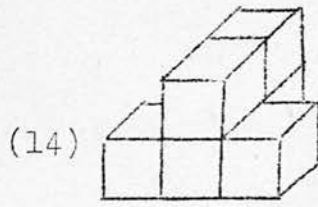
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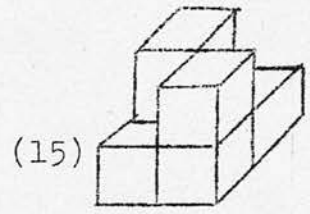
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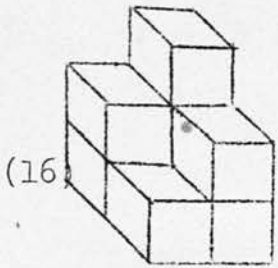
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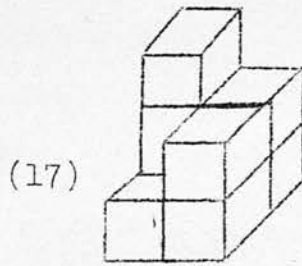
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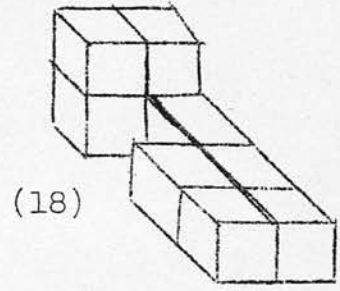
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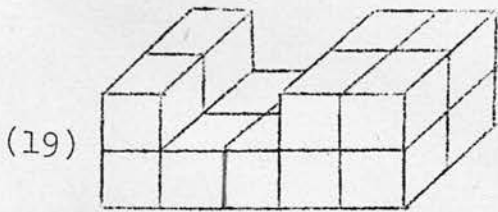
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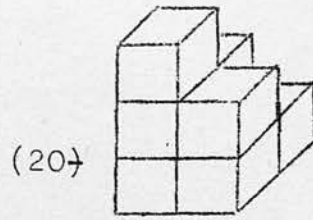
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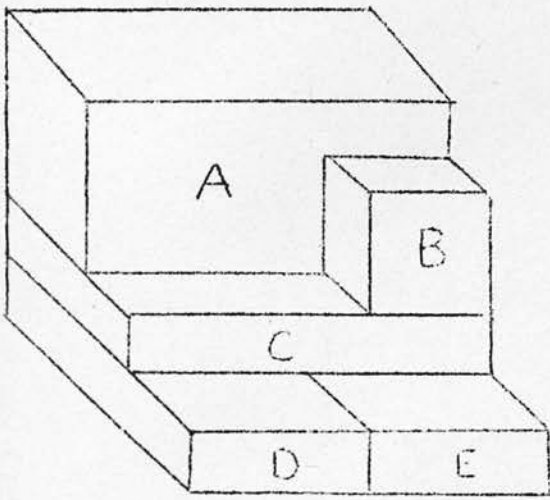
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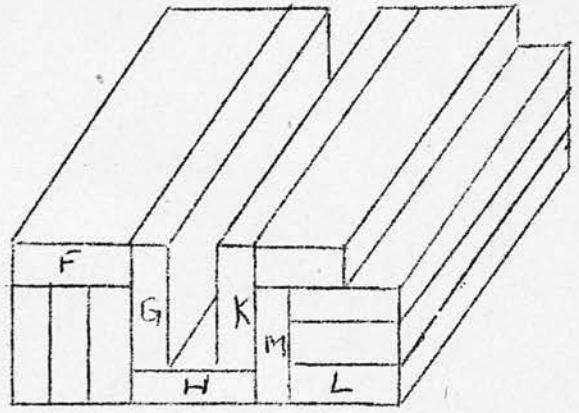
( )

Look over your work until you are told to stop

Do not turn over to the next page until you are told.



Picture 1



Picture 2

Here are pictures of two piles of blocks. Some blocks are named by letters. You have to find out how many blocks are touched by the blocks named in the questions below.

For example:

How many blocks does B touch? ( 2 )

Block B touches block C and block A, so the answer is 2, so we have written 2 in the brackets at the end of the line.

NOW ANSWER THESE QUESTIONS BY WRITING A NUMBER IN THE BRACKETS AT THE END OF EACH LINE.

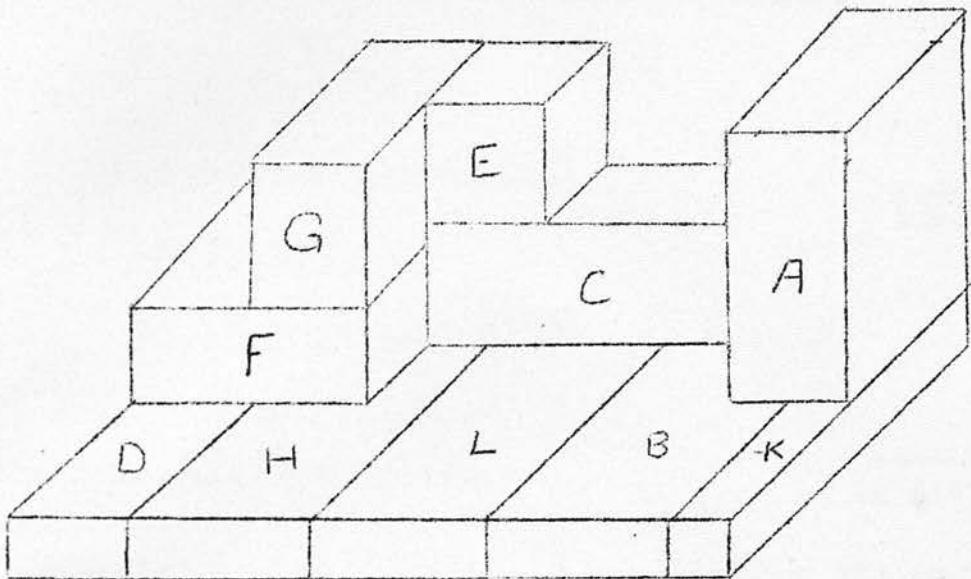
Using Picture 1

- (21) How many blocks does E touch ? ( )
- (22) How many blocks does A touch? ( )
- (23) How many blocks does C touch? ( )
- (24) How many blocks does D touch? ( )

Using Picture 2

- (25) How many blocks does F touch? ( )
- (26) How many blocks does G touch ( )
- (27) How many blocks does H touch? ( )
- (28) How many blocks does K touch? ( )
- (29) How many blocks does L touch? ( )
- (30) How many blocks does M touch? ( )

Go straight on to the next page without waiting to be told.



Picture 3

The above picture is made up of ten blocks, all of which have been lettered. Using Picture 3 answer the following questions. Put your answers in the brackets.

- (31) How many blocks does A touch? (       )
- (32) How many blocks does B touch? (       )
- (33) How many blocks does C touch? (       )
- (34) How many blocks does D touch? (       )
- (35) How many blocks does E touch? (       )
- (36) How many blocks does F touch? (       )
- (37) How many blocks does G touch? (       )
- (38) How many blocks does H touch? (       )
- (39) How many blocks does K touch? (       )
- (40) How many blocks does L touch? (       )

Look over your answers until you are told to stop.



JUNIOR SPACE TEST 2

Fill in the following particulars:

Your Surname.....

Your Christian Name(s).....

Sex ( B or G ) .....

Name of Your School.....

Class you are in.....

Your Age.....years

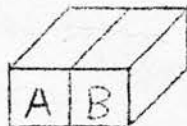
Date of your Birthday.....

Today's Date.....

Not to be filled in by the pupil	
Age in years and completed months  y.                      m.	
Page	Score
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Total	
Signature of  Marker	



A cube has six sides or faces.



Now suppose that we place the two cubes A and B together as shown in the picture and then paint the outside of the whole block.

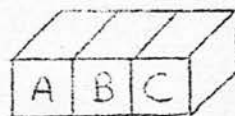
How many sides of cube A will be painted?

Put your answer in the brackets. (            )

How many sides of cube B will be painted?

Put your answer in the brackets. (            )

Now see if you can do the next three questions for yourself.



Suppose we join three cubes A, B and C together as shown in the picture and then paint the outside of the whole block.

(1) How many sides of cube C will be painted? (            )

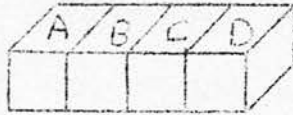
(2) How many sides of cube A will be painted? (            )

(3) How many sides of cube B will be painted? (            )

Do not turn over to the next page until you are told.

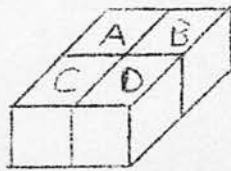
Page 2

The following questions should be worked out in the same way as the ones you have just done. You are to go right through to the end of the test. You will have 20 minutes. Are you all ready? Begin.



Suppose that we place together four cubes A, B, C, and D as shown above and then paint the outside of the whole block.

- (1) How many sides of cube D will be painted? (            )
- (2) How many sides of cube A will be painted? (            )
- (3) How many sides of cube C will be painted? (            )
- (4) How many sides of cube B will be painted? (            )
- (5) How many cubes will be painted on Five sides? (            )
- (6) How many cubes will be painted on Four sides? (            )

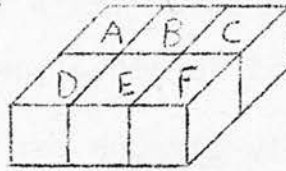


Now suppose that we join four cubes together in a different way as shown and paint the outside of the whole block.

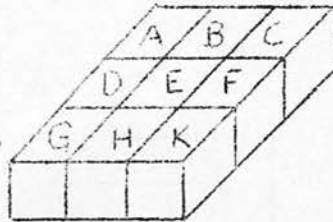
- (7) How many sides of cube D will be painted? (            )
- (8) How many sides of cube A will be painted? (            )
- (9) How many cubes will be painted on four sides (            )

Go straight on to the next page without waiting to be told.

Let us now place together six cubes as shown and paint the outside.



- (10) How many sides of cube F will be painted? (      )
- (11) How many sides of cube C will be painted? (      )
- (12) How many sides of cube E will be painted? (      )
- (13) How many sides of cube B will be painted? (      )
- (14) How many cubes will be painted on four sides? (      )
- (15) How many cubes will be painted on 3three sides? (      )

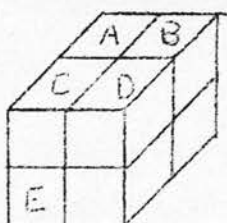


We shall now place together nine cubes and paint the outside.

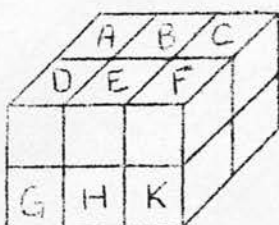
- (16) How many sides of cube K will be painted? (      )
- (17) How many sides of cube G will be painted? (      )
- (18) How many sides of cube A will be painted? (      )
- (19) How many sides of cube H will be painted? (      )
- (20) How many sides of cube B will be painted? (      )
- (21) How many sides of cube E will be painted? (      )
- (22) How many cubes will have four sides painted? (      )
- (23) How many cubes will have three sides painted? (      )
- (24) How many cubes will have two sides painted? (      )

Go straight on to the next page without waiting to be told.

Let us now place together eight cubes as shown in the drawing. They are in two layers of four, one on top of the other. If we now paint the outside of the whole block



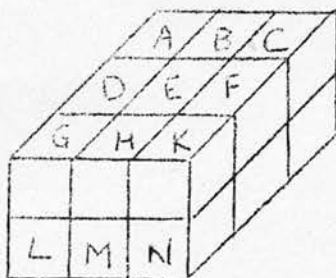
- (25) How many sides of cube D will be painted (       )
- (26) How many sides of cube B will be painted? (       )
- (27) How many sides of cube E will be painted? (       )
- (28) How many cubes will have three sides painted? (       )



In the above picture twelve cubes have been joined together in two layers of six, but only some of the cubes have been lettered. If the outside is painted

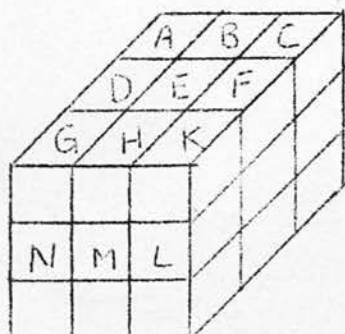
- (29) How many cubes will have three sides painted? (       )
- (30) How many cubes will have two sides painted? (       )
- (31) How many unpainted sides has cube F? (       )
- (32) How many unpainted sides has cube E? (       )
- (33) How many unpainted sides has cube G? (       )

Go straight on to the next page without waiting to be told.



In the above drawing there are two layers of nine cubes or eighteen altogether. Only some are lettered. The whole of the outside is painted.

- (34) How many sides of cube B are painted? (        )
- (35) How many sides of cube D are painted? (        )
- (36) How many unpainted sides has cube M? (        )
- (37) How many unpainted sides has cube E? (        )
- (38) How many cubes have three sides painted? (        )
- (39) How many cubes have four sides painted? (        )
- (40) How many cubes have two sides painted? (        )
- (41) How many cubes have one side painted? (        )



In the above drawing there are three layers of nine cubes or twenty seven in all. Only some are lettered. The whole of the outside is painted.

- (42) How many sides of cube M are painted? (        )
- (43) How many sides of cube N are painted? (        )
- (44) How many sides of cube E are painted? (        )
- (45) How many unpainted sides has cube A ? (        )
- (46) How many cubes are painted on three sides? (        )
- (47) How many cubes are painted on two sides? (        )
- (48) How many cubes are painted on one side? (        )
- (49) How many cubes are painted on four sides? (        )
- (50) How many cubes are unpainted? (        )



MORAY HOUSE EXPERIMENTAL

**SERIES TEST I**

Fill in the following particulars at once :—

Your Surname.....  
(Use capital letters)

Your Christian Name(s).....  
(Use capital letters)

Sex (B. or G.).....

Name of your School.....

Class you are in.....

Your Age.....Years.

Date of your Birthday.....  
(Write the month as a word)

To-day's Date.....

Not to be filled in by  
the Pupil

Age in years and completed  
months.

y. m.

Page. Score.

1.

2.

3.

TOTAL

4.

5.

6.

TOTAL

GRAND  
TOTAL

Signature of Marker :

# NUMBER SERIES

All the questions in this test have to do with numbers. The numbers are arranged in a certain order but some of them have been missed out. You have to find out in what order the numbers have been arranged and then fill in the missing numbers.

Look at the following examples. The last number has been missed out in each case and you have to fill it in. Put it above the .....

(a) 1 2 3 4 .....

(b) 2 4 6 8 .....

Now do the following questions yourself. Remember you have to fill in the last number.

- |     |   |   |   |   |     |      |      |      |       |
|-----|---|---|---|---|-----|------|------|------|-------|
| 1.  | . | . | . | . | 3   | 5    | 7    | 9    | ..... |
| 2.  | . | . | . | . | 3   | 6    | 9    | 12   | ..... |
| 3.  | . | . | . | . | 11  | 9    | 7    | 5    | ..... |
| 4.  | . | . | . | . | 10  | 15   | 20   | 25   | ..... |
| 5.  | . | . | . | . | 50  | 40   | 30   | 20   | ..... |
| 6.  | . | . | . | . | 2   | 4    | 8    | 16   | ..... |
| 7.  | . | . | . | . | 80  | 40   | 20   | 10   | ..... |
| 8.  | . | . | . | . | 2d. | 3½d. | 5d.  | 6½d. | ..... |
| 9.  | . | . | . | . | 2/6 | 2/-  | 1/6  | 1/-  | ..... |
| 10. | . | . | . | . | 2/6 | 5/-  | 10/- | £1   | ..... |

Look over your answers until you are told to stop

DO NOT TURN OVER TO THE NEXT PAGE UNTIL YOU ARE TOLD

You are now to do questions 11-50 yourself. After you start you are to go straight on to question 50 without waiting to be told. If you come to any question which you cannot do, do not waste time on it but go on to the next. You will have 15 minutes from the time you start question 11.

In the next ten questions the last two numbers have been missed out and you have to fill them in.

Here is an example :—

2      4      6      8      .....      .....

Now do these questions. Remember that you have to fill in two numbers in each question.

11.	.	.	.	1	3	5	7	.....	.....
12.	.	.	.	4	9	14	19	.....	.....
13.	.	.	.	3	6	12	24	.....	.....
14.	.	.	.	5	8	11	14	.....	.....
15.	.	.	.	37	32	27	22	.....	.....
16.	.	.	.	3	2	3	4	3	6
17.	.	.	.	9	1	7	1	5	1
18.	.	.	.	6	5	7	6	8	7
19.	.	.	.	4	3	4	5	4	7
20.	.	.	.	2	3	3	4	4	5

Go straight on to the next questions

The next ten questions are the same as the first ten except that the number which has been missed out may come in the middle or at the beginning. You have to fill in the missing number.

21.	.	.	.	.	.	3	5	.....	9
22.	.	.	.	.	.	5	.....	13	17
23.	.	.	.	.	.	.....	4	6	8
24.	.	.	.	.	.	2	4	.....	16
25.	.	.	.	.	.	14	.....	8	5
26.	.	.	.	.	.	.....	12	6	3
27.	.	.	.	.	.	27	.....	13	6
28.	.	.	.	.	.	1	6	.....	16
29.	.	.	.	.	.	.....	8	4	2
30.	.	.	.	.	.	3	.....	27	81

TURN OVER TO THE NEXT PAGE WITHOUT WAITING TO BE TOLD

Go straight on to the next questions.

In the next ten questions the missing numbers are sometimes at the ends and sometimes in the middle and in each case two numbers have been left out. So you have to fill in two numbers in each question.

31.	.	.	.	.	2	4	.....	.....	10	12
32.	.	.	.	.	.....	7	9	11	.....	15
33.	.	.	.	.	1	2	.....	8	.....	32
34.	.	.	.	.	35	.....	25	.....	15	10
35.	.	.	.	.	64	32	.....	.....	4	2
36.	.	.	.	.	.....	.....	3	7	3	9
37.	.	.	.	.	7	7	.....	.....	3	3
38.	.	.	.	.	27	.....	21	.....	15	12
39.	.	.	.	.	1	.....	4	.....	16	32
40.	.	.	.	.	.....	5	9	.....	17	21

Go straight on to the next questions

In the next ten questions some have one number missing and some have two numbers missing. You have to fill in a number in each place where there is a .....

41.	.	.	.	.....	5	8	11	.....	.....
42.	.	.	.	12	.....	26	33	.....	.....
43.	.	.	.	3	11	.....	27	.....	.....
44.	.	.	.	1	3	6	10	.....	.....
45.	.	.	.	25	24	22	19	.....	.....
46.	.	.	.	.....	25	22	18	13	.....
47.	.	.	.	.....	10	15	20	25	.....
48.	.	.	.	3	7	.....	15	.....	23
49.	.	.	.	8	3	.....	.....	8	7
50.	.	.	.	4	5	5	.....	.....	7 7 8

Look over your answers until you are told to stop

**DO NOT TURN OVER TO THE NEXT PAGE UNTIL YOU ARE TOLD**

## LETTER SERIES

The questions in this test are like those you have just done except that letters are used instead of numbers. They are arranged in a certain order but some of the letters have been missed out. You have to find out in what order the letters have been arranged and then fill in the missing letters.

A copy of the alphabet is printed at the top of each page to help you.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Look at these two examples :—

(a) A B C D .....

(b) D F H J .....

Now try the following ten questions yourself. You have to fill in one letter in each case.

1. . . . . A C E G .....
2. . . . . Z Y X W .....
3. . . . . Y W V S .....
4. . . . . J L N P .....
5. . . . . A D G J .....
6. . . . . Q S U W .....
7. . . . . P O N M .....
8. . . . . Z X V T .....
9. . . . . H J M Q .....
10. . . . . A B D G K .....

Look over your answers until you are told to stop

DO NOT TURN OVER TO THE NEXT PAGE UNTIL YOU ARE TOLD



You are now to do questions 11-50 yourself. After you start you are to go straight on to question 50 without waiting to be told. If you come to any question which you cannot do, do not waste time on it but go on to the next. You will have 20 minutes from the time you start question 11.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

In the next ten questions the last two letters in the series have been missed out and you have to fill them in.

Look at this example :—

A C E G I ..... ..

Now do these questions. Remember that you have to fill in two letters in each case.

11.	.	.	.	A	A	B	B	C	C	.....	.....
12.	.	.	.	A	B	A	C	A	D	.....	.....
13.	.	.	.	P	T	Q	T	R	T	.....	.....
14.	.	.	.	A	B	B	C	C	D	.....	.....
15.	.	.	.	A	C	C	E	E	G	.....	.....
16.	.	.	.	A	Z	B	Y	C	X	.....	.....
17.	.	.	.	C	L	D	M	E	N	.....	.....
18.	.	.	.	T	N	S	M	R	L	.....	.....
19.	.	.	.	M	N	L	O	K	P	.....	.....
20.	.	.	.	Z	X	V	T	R	P	.....	.....

Go straight on to the next questions

The next ten questions are the same as the first ten except that the letter which has been missed out may come in the middle or at the beginning. You have to fill in the missing letter.

21.	.	.	.	.	.	.	D	.....	F	G
22.	.	.	.	.	.	.	Z	Y	.....	W
23.	.	.	.	.	.	.	.....	D	F	H
24.	.	.	.	.	.	.	H	.....	L	N
25.	.	.	.	.	.	.	S	R	.....	P
26.	.	.	.	.	.	.	.....	M	K	I
27.	.	.	.	.	.	.	A	D	.....	J
28.	.	.	.	.	.	.	S	.....	W	Y
29.	.	.	.	.	.	.	P	M	.....	G
30.	.	.	.	.	.	.	.....	E	I	M

Go straight on to the next questions

TURN OVER TO THE NEXT PAGE WITHOUT WAITING TO BE TOLD

# 6

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

In the next ten questions two letters have been missed out, and the missing letters are sometimes at the ends of the series and sometimes in the middle. You have to fill in two letters in each question.

31. . . . A C ..... G ..... K
32. . . . A B ..... A D
33. . . . O P O Q ..... ..
34. . . . ..... E M F M
35. . . . Y Z ..... U V S T
36. . . . A D B E ..... D G
37. . . . ..... Q T R U S V
38. . . . ..... A B A C A D
39. . . . Z Y Y X ..... W V
40. . . . M N L O ..... J Q

Go straight on to the next questions

In the next ten questions two letters have been missed out. The missing letters are sometimes at the end and sometimes in the middle. Remember you have to fill in two letters in each question.

41. . . . P R Q S R T ..... ..
42. . . . A N B O C P ..... ..
43. . . . A D D G G J ..... ..
44. . . . A G C I ..... G M
45. . . . S R ..... Q P P O
46. . . . C Q D R E S ..... ..
47. . . . Z A ..... X C W D
48. . . . P M Q N ..... S P
49. . . . C P ..... G T I V
50. . . . ..... B D C E D F

**LOOK OVER YOUR ANSWERS  
UNTIL YOU ARE TOLD TO STOP**



MORAY HOUSE EXPERIMENTAL

JUNIOR LANGUAGE TEST I

Fill in the following particulars at once :—

Your Surname.....  
(Use capital letters)

Your Christian Name(s).....  
(Use capital letters)

Sex (B. or G.).....

Name of your School.....

Class you are in.....

Your Age.....Years

Date of your Birthday.....  
(Write the month as a word)

To-day's Date.....

Not to be filled in by Pupil	
Age in years and completed months.	
y.	m.
Page.	Score.
1.	
2.	
3.	
4.	
TOTAL	
5.	
6.	
7.	
8.	
9.	
10.	
TOTAL	
GRAND TOTAL	
Signature of Marker :	

# SECTION ONE

All the questions in this part of the test have to do with words.

Look at this example :—

LONG . . . . . ( large | short | heavy | round )

Now see if you can do the next four questions :—

1. HAPPY . . . . . ( glad | merry | sad | heavy )
2. BROAD . . . . . ( thick | deep | wide | narrow )
3. DULL . . . . . ( bright | clean | white | grey )
4. BRAVE . . . . . ( quick | cowardly | cruel | strong )

Look over your answers until you are told to stop.

Now look at this example :—

LARGE . . . . . ( round | bright | big | small )

Now do the next four questions yourself :—

5. FOE . . . . . ( friend | enemy | tool | mistake )
6. DESIRE . . . . . ( delight | thank | refuse | wish )
7. PURSUE . . . . . ( follow | preserve | hide | help )
8. VULGAR . . . . . ( fraction | uncommon | rude | polite )

Look over your answers until you are told to stop.

Here is another kind of question. Look at this example :—

BARKS . . . . . ( cat | horse | dog | sheep )

Now do the next four questions :—

9. GRUNTS . . . . . ( hedgehog | horse | pig | wolf )
10. CROWS . . . . . ( donkey | cock | raven | fox )
11. ROARS . . . . . ( elephant | eagle | dog | lion )
12. TWITTERS . . . . . ( mouse | swallow | bat | kitten )

Look over your answers until you are told to stop.

DO NOT TURN OVER TO THE NEXT PAGE UNTIL YOU ARE TOLD



In the next four questions you have to underline the word in the brackets which fits the sentence best.

For example :—

The gale raged ( *quietly* | *furiously* | *slowly* | *calmly* ) outside.

Now do the next four :—

13. The tiny boat drifted ( *helplessly* | *gently* | *fearfully* | *bravely* ) on the rough sea.
14. A fire burned ( *happily* | *foolishly* | *brightly* | *crossly* ) in the sitting-room.
15. The dog barked ( *excitedly* | *sadly* | *feebly* | *silently* ) as we set out.
16. The house is ( *proudly* | *usefully* | *foolishly* | *conveniently* ) situated near the station.

Go straight on to the next four questions.

In these questions you have to underline the word in the brackets which finishes the sentence best :—

17. John turned as white as a ( *snowdrop* | *sheet* | *lamb* | *paper* ).
18. Wrapped in the woollen rug, the little girl was as warm as a ( *cosy* | *stove* | *mitten* | *pie* ).
19. The rascal made off as quick as ( *the wind* | *lightning* | *fire* | *a racer* ).
20. The burglar was as cunning as a ( *cat* | *lion* | *deer* | *fox* ).

In the same way underline one word in brackets which fits each of the following sentences best :—

21. A cat has ( *fierce* | *short* | *sharp* | *soft* ) claws.
22. The ( *mischievous* | *stupid* | *fat* | *greedy* ) puppy has run off with my slipper.
23. The snowdrop is a ( *spring* | *summer* | *autumn* | *winter* ) flower.
24. The train starts when the ( *red* | *orange* | *white* | *green* ) flag is waved.

Look over your answers to the last twelve questions until you are told to stop.

**DO NOT TURN OVER TO THE NEXT PAGE UNTIL YOU ARE TOLD**

In the following questions you have to underline the word in the brackets which means the same as the word printed in capital letters.

You have done this kind of question before, but here is another example :—

EVIL . . . . . ( good | pleasant | wicked | happy ).

Now do the questions which follow :—

25. ENORMOUS . . . . . ( horrid | huge | solemn | splendid )  
 26. LIVELY . . . . . ( living | pale | gay | hateful )  
 27. TROPICAL . . . . . ( common | pleasant | seasonal | hot )

Go straight on to the next questions.

In the next four questions you have to underline the word in brackets which means the same as the word printed in capitals in the sentence :—

28. This medicine has a HORRID taste. ( sweet | painful | pleasant | nasty )  
 29. The young officer was a FEARLESS leader. ( cowardly | weak | brave | frightening )  
 30. That is an EXPENSIVE toy. ( cheap | good | unnecessary | costly )  
 31. There is a VACANT shop at the end of our street. ( closed | ice-cream | empty | new )

Go straight on to the next questions.

In the next five questions you have to underline the word or words in the brackets which answer the question :—

32. To ASCEND means . . . . . ( to go up | to lift | to lower | to stop )  
 33. A DUMB man . . . . . ( cannot see | cannot walk | cannot speak | cannot live )  
 34. A TALE is for . . . . . ( wagging | holding | reading | sitting )  
 35. A THERMOMETER tells . . . . . ( the time | the weather | the temperature | the speed )  
 36. A QUAY is for . . . . . ( doors | ships | shopping | playing )

Go straight on to the next questions.

In the next four questions underline the word in brackets which fits the sentence best :—

37. The cart ( moved | slid | rumbled | ran ) over the cobbled street.  
 38. The engine ( puffed | ducked | whistled | jumped ) as it entered the tunnel.  
 39. The water ( trundled | swam | splashed | rippled ) over the smooth stones.  
 40. The man ( whispered | spoke | shouted | muttered ) from the other side of the broad river.

Go straight on to the next questions.

TURN OVER TO THE NEXT PAGE WITHOUT WAITING TO BE TOLD

Look at this example :—

**SHEEP** . . . . . ( *crowd* | *field* | *flock* | *grass* )

You have to underline the word in the brackets which means a collection or a group of sheep.

A collection or a group of sheep is called a flock, so we have drawn a line under the word flock.

Now do these questions :—

41. BEES . . . . . ( *hive* | *swarm* | *cluster* | *cloud* )

42. PEOPLE . . . . . ( *battalion* | *crew* | *team* | *crowd* )

43. COWS . . . . . ( *herd* | *crowd* | *flock* | *cluster* )

44. DOGS . . . . . ( *flock* | *pack* | *collection* | *herd* )

Go straight on to the next questions.

In the following questions all the words in the list belong to one group except one. You have to underline the odd one. For example :—

Tommy | Dick | Betty | John | Robert.

All of the names are boys' names except Betty, so Betty has been underlined.

Now do the next four questions :—

45. . . . . ( *Rose* | *lily* | *cauliflower* | *pansy* | *wallflower* )

46. . . . . ( *Owl* | *wren* | *ostrich* | *crow* | *bat* )

47. . . . . ( *Table* | *floor* | *chair* | *piano* | *wireless* )

48. . . . . ( *Half-crown* | *sixpence* | *penny* | *shilling* | *florin* )

Go straight on to the next questions.

In the following sentences underline the correct word in the brackets :—

49. A person who walks on the road or street is a  
( *motorist* | *pedestrian* | *runner* | *observer* )

50. A man who plans houses is an ( *architect* | *builder* | *plumber* | *painter* ).

END OF SECTION I

DO NOT TURN OVER TO THE NEXT PAGE UNTIL YOU ARE TOLD

## SECTION TWO

On the next few pages there are some short stories for you to read. You must read them carefully, for after each story there are a number of questions about the story which you have to answer.

Here is the first story. It is a letter from a little girl to her friend :—

DEAR JOAN,

I am going to the seaside on Saturday and I shall be away for a fortnight. I am taking Tim, my terrier, with me, but Mother says I cannot take my little kitten, Topsy, as she might get lost in the strange place. I am wondering if Ann and you would look after her while I am away. I shall be grateful if you will keep her for me.

Your loving friend,

DOROTHY.

Now see if you can answer the following questions. They are all about the letter we have just read, and you should draw a line under the correct answer in the brackets.

1. Who was going on a holiday to the seaside ? ( *Joan* | *Dorothy* | *Topsy* | *Ann* )
2. The holiday was to last . . . . . ( *one week* | *two weeks* | *three weeks* | *a month* )
3. Tim was a . . . . . ( *boy* | *cat* | *dog* | *toy* )
4. Topsy was not being taken on holiday because . . . . . ( *she did not want to go* | *she might get lost in the strange place* | *Joan was going to keep her* | *Tim was going* )

Look over your answers until you are told to stop.

Now let us read the second story together :—

One summer day Mother Bear, and Father Bear, and Little Bear were walking in the wood when they met Mrs. Porcupine. Mrs. Porcupine had her twins with her, but when she saw the bears she sent them home.

Now answer the following questions. Remember you have to draw a line under the correct answer in the brackets.

5. How many bears were walking in the wood ? . . . . . ( *Two* | *three* | *four* | *five* )
6. How many porcupines were walking in the wood ? . . . . . ( *Two* | *three* | *four* | *five* )
7. When Mrs. Porcupine met the Bears what did she do ?  
( *Stopped* | *sent the twins home* | *ran on* | *shook with fear* )

Look over your answers until you are told to stop.

Here is another story. Let us read it together :—

And what a lovely garden it was ! In the middle of the smooth green lawn stood a large tree whose branches made dark shadows on the grass. At the sides of the lawn ran an old red brick path with a border of all kinds of flowers.

Now answer the following questions. Draw a line under the correct answer in the brackets.

8. The lawn was . . . . . ( *smooth* | *rough* | *brown* | *large* )
9. The tree was . . . . . ( *old* | *dark* | *bent* | *large* )
10. The path was . . . . . ( *green* | *red* | *brown* | *yellow* )

Look over your answers until you are told to stop.

DO NOT TURN OVER TO THE NEXT PAGE UNTIL YOU ARE TOLD

Now read the next little story for yourself and then answer the four questions about it. When you have done that go straight on and read the next story and answer the questions about it. Then read the next story, and so on right to the end of the test.

Here is the first of these stories :—

In this forest there were many trees and many flowers. There were many houses, too, but these could not be seen. The houses were under the ground and they were called burrows. Each one had many rooms and there were always two doors for safety. If an enemy came in at one door the rabbits ran out at the other.

Now answer these questions. Draw a line under the right answer.

11. What could not be seen in the forest ? . . . ( *trees* | *flowers* | *houses* | *rabbits* )
12. Who lived in the houses ? . . . ( *people* | *rabbits* | *the enemy* | *mice* )
13. The houses were called . . . ( *bungalows* | *cottages* | *dens* | *burrows* )
14. There were always two doors for . . . ( *safety* | *fresh air* | *light* | *play* )

Go straight on to the next story without waiting to be told.

Read this story yourself and then answer the four questions about it :—

Blue Sky was a Red Indian girl who lived in America. One day her mother said to her, "Will you please make a water jar for me?" Blue Sky ran to the river. She dug clay from the bank and took home as much as she could carry. She was going to use the clay to make the water jar.

Now answer these questions. Draw a line under the right answer :—

15. Where did Blue Sky live ? . . . ( *India* | *Africa* | *Britain* | *America* )
16. What was Blue Sky's mother going to put in the jar ? ( *water* | *clay* | *jam* | *paste* )
17. How much clay did Blue Sky take home ?  
( *none at all* | *a little* | *as much as she could carry* | *a heavy load* )
18. Why did she want the clay ?  
( *to make mud pies* | *to make a water jar* | *to make a bank* | *to put in a flower pot* )

Go straight on to the next story without waiting to be told.

**TURN OVER TO THE NEXT PAGE WITHOUT WAITING TO BE TOLD**



**Here is the next story :—**

The children spent two weeks at the seaside. Every morning they went in to bathe for half an hour. Afterwards they played in the sand, building castles and digging little canals. In the afternoon they usually looked for crabs and starfish or gathered shells. One afternoon they went for a sail in a little boat.

**Now answer these questions. Draw a line under the right answer.**

19. How many days did the children spend at the seaside ?  
( *two* | *seven* | *ten* | *fourteen* )
20. They went in to bathe for  
( *fifteen minutes* | *twenty minutes* | *twenty-five minutes* | *thirty minutes* )
21. During the morning they  
( *looked for crabs* | *gathered shells* | *went for a sail* | *built sand castles* )
22. On most afternoons they  
( *went for a sail* | *dug canals* | *looked for crabs and starfish* | *went in to bathe* )

**Go straight on to the next story without waiting to be told.**

**Here it is :—**

The sun always rises in the eastern sky, climbs in an arch, and sinks in the west. Although its light is gone from us, it is still shining for other boys and girls in far-away lands. When we are sleeping on our side of the round world because the night is here, other children are waking because it is daylight and the sun is shining for them.

**Now answer these questions. Draw a line under the right answer.**

23. The sun rises in the . . . . . ( *north* | *south* | *east* | *west* )
24. The sun sinks in the . . . . . ( *north* | *south* | *east* | *west* )
25. When it is night here, on the other side of the world it is  
( *daylight* | *cold* | *hot* | *dark* )
26. The world is . . . . . ( *flat* | *sunny* | *round* | *square* )

**TURN OVER TO THE NEXT PAGE WITHOUT WAITING TO BE TOLD**

Here is the next story :—

One night, a few days after James had left, I had eaten my hay and was lying down in my straw fast asleep when I was suddenly wakened by the stable bell ringing loudly. I heard the door of John's house opened and his feet running up to the Hall where the squire lived. He was back again in no time. He unlocked the stable door and came in, calling out, "Wake up, Beauty, you must go well now if ever you did."

"Black Beauty."

Now see if you can answer these questions. Remember you have to draw a line under the correct answer in the brackets.

27. Who is telling the story ? . . . . . ( *James | John | Beauty | the Squire* )
28. Beauty was a . . . . . ( *woman | man | cow | horse* )
29. Beauty was wakened by  
( *a door opening | someone calling | a bell ringing | footsteps running* )
30. The Hall was . . . . . ( *a cottage | a village hall | a large room | a big house* )

Go straight on to the next story without waiting to be told.

Here it is :—

As Mary's birthday, which was in the shortest month of the year, fell on a Sunday she had her birthday party the day before. Her mother made her a beautiful iced cake, and there were eight candles on it. Mary invited to her party Joan, aged six, Wilma, aged eight, and the twins, Muriel and Sheila, who were a few weeks younger than Mary.

Now answer the following questions. Draw a line under the correct answer :—

31. On which day did Mary have her party ? ( *Friday | Saturday | Sunday | Monday* )
32. Who was Sheila's sister ? . . . . . ( *Joan | Muriel | Mary | Wilma* )
33. Who was the oldest at the party ? . . . . . ( *Mary | Sheila | Joan | Wilma | Muriel* )
34. In which month was Mary's birthday ? . . . . . ( *February | March | April | May* )

Go straight on to the next story.

TURN OVER TO THE NEXT PAGE WITHOUT WAITING TO BE TOLD

Here is the next story :—

The place where the children were going was a sort of marshy thicket at the bottom of a field near the house. It wasn't a big thicket, but it looked big because the trees and bushes grew so closely that you could not see just where it ended. In winter the ground was damp and boggy, so that nobody went there, excepting cows, who don't mind getting their feet wet : but in summer the water dried away, and then it was all fresh and green, and full of delightful things. This place the children called "Paradise."

"What Katy Did."

Now answer the following questions. Remember all you have to do is to draw a line under the correct answer in the brackets.

35. A thicket is a . . . . . ( *tree* | *marsh* | *wood* | *forest* )
36. The thicket was . . . . . ( *small* | *big* | *unending* | *gloomy* )
37. Nobody went there in winter because . . . . . ( *cows were there* | *it was damp and boggy* | *it was too far away* | *nobody was allowed to go* )
38. Write down the word in the passage which tells us that the children must have enjoyed going there in summer.  
Write it in the brackets . . . . . (.....)

Go straight on to the next story.

Here is the next story :—

John took his little sister Mary and his cousins James and Joan to the zoo one Saturday. Joan was older than her brother but younger than John. The two boys wanted to see the monkeys first while the girls wanted to see the penguins. They arranged to meet again to have a ride on the elephant before going for tea at half-past three.

Now answer the following questions. Draw a line under the correct answer in brackets.

39. Joan was James's . . . . . ( *brother* | *sister* | *cousin* | *nephew* )
40. James was Mary's . . . . . ( *brother* | *sister* | *cousin* | *nephew* )
41. ( *Mary* | *James* | *John* | *Joan* ) was the oldest of the four children.
42. They went for tea at . . . . . ( 3.0 | 3.15 | 3.30 | 3.45 )

Go straight on to the next story without waiting to be told.

TURN OVER TO THE NEXT PAGE WITHOUT WAITING TO BE TOLD

Here is the next story :—

Behind, far below, were the dark woods and the shining salmon river ; and on the left, far below, were the town and the smoking chimneys of the collieries : and far, far away, the river widened to the shining sea ; and the little white specks, which were ships, lay on its bosom. Before, spread out like a map, lay great plains, the farms, and villages amid dark knots of trees. To the right rose moor after moor, hill after hill, till they faded away, blue into blue sky.

Now answer the following questions. Draw a line under the correct answer in brackets.

43. Where was the person describing this scene standing ?  
( *on a hill-top* | *at the seaside* | *on a moor* | *in a village* )
44. The countryside was spread out like a . . . . . ( *river* | *plain* | *map* | *town* )
45. On the left lay . . . . . ( *moor after moor* | *the salmon river* |  
*the dark woods* | *the town and the smoking chimneys of the collieries* )
46. The white specks were . . . . . ( *feathers* | *snowflakes* | *ships* | *clouds* )

Go straight on to the next story without waiting to be told.

Here is the next story. It is a little poem this time.

I wish I lived in a caravan  
With a horse to drive like a pedlarman.  
Where he comes from nobody knows  
Or where he goes to, but on he goes.

Now answer the next four questions. Draw a line under the correct answer :—

47. Who do you think is speaking ? . . . . . ( *a child* | *the pedlarman* | *nobody* | *mother* )
48. Where does the pedlarman come from ?  
( *the country* | *the town* | *nowhere* | *nobody knows* )
49. Who lives in the caravan ?  
( *nobody* | *the pedlarman* | *the horse* | *another person* )
50. How did the caravan move ? . . . . . ( *it was pulled by a motor car* |  
*it was pulled by a horse* | *it was pushed* | *it moved by itself* )

**THERE ARE NO MORE QUESTIONS**

**LOOK OVER ALL YOUR ANSWERS  
UNTIL YOU ARE TOLD TO STOP**

Here is the next story:

The first day of the year, the first of January, is a very important day for the people of the world. It is the day when the new year begins, and the old year ends. It is a day of celebration and joy, and people all over the world celebrate it in different ways. Some people have parties, some have religious services, and some have family gatherings. It is a day when people look back on the past year and think about the future.

Now answer the following questions. Give a full answer in English.

1. What is the first day of the year?

2. Why is it an important day?

3. How do people celebrate it?

4. What do people think about the future?

5. How do people look back on the past year?

6. What is the next story?

The second day of the year is the second of January. It is a day when people continue to celebrate the new year.

Here is the next story. It is a little story for you.

I wish I lived in a mountain.  
I wish I lived in a valley.  
I wish I lived in a city.  
I wish I lived in a country.  
I wish I lived in a town.  
I wish I lived in a village.

Now answer the next four questions. Give a full answer in English.

1. What is the next story?

2. Why does the speaker wish to live in different places?

3. What does the speaker like about each place?

4. What does the speaker like about the country?

5. How did the speaker feel about the city?

6. How did the speaker feel about the village?

THERE ARE NO MORE QUESTIONS

LOOK OVER ALL YOUR ANSWERS

UNTIL YOU ARE TOLD TO STOP



MORAY HOUSE, UNIVERSITY OF EDINBURGH

JUNIOR ARITHMETIC TEST

Fill in the following particulars at once :—

Your Surname.....  
(Use capital letters)

Your Christian Name(s).....  
(Use capital letters)

Sex (Boy or Girl).....

Name of your School.....

Class you are in.....

Your Age.....Years

Date of your Birthday.....  
(Write the month as a word)

To-day's Date.....

Read the following carefully :—

1. This Test is in two sections. There are four pages in the first section and three pages in the second. Twenty minutes will be allowed for each section.
2. You may work the sums in your head ; or you may do your working in the margin if you wish to do so.
3. Work as quickly and as carefully as you can. Make any changes in your answers clearly.
4. No one is expected to do everything. Just do as much as you can. If you cannot do any question, don't waste time on it, but leave it out and go on to the next.
5. When you are told to do so, turn over to page 1. The rules at the top of page 1 will be read to you while you follow, and you must then start working the Test at once.
6. When you have finished one page go on to the next, as far as page 4, and then look over your work till time is up. Do not turn over to page 5 till you are told.
7. When you are told to stop, STOP WORKING AT ONCE.
8. Ask no questions at all.

Not to be filled in  
by Pupil

Age in years and completed  
months.

y. m.

Page.	Score	
1.		
2.		
3.		
4.		
TOTAL - -		
5.		
6.		
7.		
TOTAL - -		
GRAND TOTAL		
Signature of Marker :		
Arithmetic Quotient :		

# SECTION ONE

Remember to look at the top of each question to see whether it says add, subtract, multiply, or divide. Remember to work as quickly and as carefully as you can.

You will have 20 minutes for this section and you are to go right on to question 50 without waiting to be told. Now begin.

1.

Add.

6

8

5

2.

Add.

4 3

1 2

3 4

3.

Subtract.

7 6 8

5 3 2

4.

Subtract.

5 3 9

2 8 7

5.

Multiply.

7

6

6.

Multiply.

2 8

9

7.

Divide.

3 6 by 4

8.

Divide.

7 4 5 by 5

9.

Add.

5 7 4

4 6 8

6 3 5

10.

Add.

2 3 1

7 8

5 2 9

11.

Subtract.

8 3 7 4

4 7 3 6

12.

Subtract.

9 4 5 8

3 5 8 3

13.

Multiply.

3 2 4

6

14.

Multiply.

2 7 8

9

15.

Divide.

3 6 6 by 6

16.

Divide.

5 8 1 by 7

17.

Add.

4 5 0 6

2 9

7 0 8

18.

Add.

s. d.

3 4

5 6

s. d.

19.

Subtract.

7 6 0 3

6 3 8

20.

Subtract.

s. d.

7 9

3 4

s. d.

GO STRAIGHT ON TO PAGE 2

21.

**Multiply.**

4	2	3
3	2	

---



---

22.

**Multiply.**

6	5	8
7	9	

---



---

23.

**Divide.**

3 0 5 6 by 4

24.

**Divide.**

7 4 7 9 by 9

25.

**Add.**

£	s.	d.
	3	6
	1	4
	7	4

---



---

26.

**Add.**

£	s.	d.
	1	1
	4	8
	1	6

---



---

27.

**Subtract.**

£	s.	d.
1	0	1
6	5	8

---



---

28.

**Subtract.**

£	s.	d.
1	1	3
	1	4

---



---

29.

**Multiply.**

s.	d.
2	6
	5

---



---

30.

**Multiply.**

s.	d.
1	5
	7

---



---

31.

**Divide.**

2 5 4 2 by 6 2

32.

**Divide.**

1 0 2 6 by 3 8

33.

**Add.**

£	s.	d.
	1	5
	1	2
	9	7 ½

---



---

34.

**Add.**

£	s.	d.
1	6	1
	3	8
2	1	6

---



---

35.

**Subtract.**

£	s.	d.
1	4	1
	5	1

---



---

36.

Subtract.

£	s.	d.
10	12	8
7	15	6 $\frac{1}{2}$

£ : :

37.

Multiply.

£	s.	d.
	4	7
		6

£ : :

38.

Multiply.

£	s.	d.
7	11	8
		9

£ : :

39.

Divide.

£	s.	d.
75	15	10 by 5

40.

Divide.

£	s.	d.
36	9	2 by 7

41.

Add.

£	s.	d.
11	15	7
2	8	9
14	16	10

£ : :

42.

Add.

£	s.	d.
12	9	6 $\frac{1}{2}$
8	17	11
25	6	5

£ : :

43.

Subtract.

£	s.	d.
14	6	7
2	9	8 $\frac{1}{2}$

£ : :

44.

Subtract.

£	s.	d.
25	0	0
12	6	8

£ : :

45.

Multiply.

£	s.	d.
7	5	3
		9

£ : :

46.

Multiply.

£	s.	d.
12	5	8 $\frac{1}{2}$
		8

£ : :

47.

Divide.

£	s.	d.
25	19	6 by 6

48.  
Divide.

£ s. d.  
1 7 1 3 4 by 8

49.  
Add.

£	s.	d.
1 4	1 6	1 1 ½
5	1 8	7
1 2 6	7	3 ½
<hr/>		
£	:	:
<hr/>		

50.  
Subtract.

£	s.	d.
1 2	8	7 ½
4	1 1	9
<hr/>		
£	:	:
<hr/>		

**END OF SECTION ONE**

**LOOK OVER YOUR WORK UNTIL TIME IS UP**

**DO NOT TURN OVER TO THE NEXT PAGE  
UNTIL YOU ARE TOLD**



## SECTION TWO

Each of the sums in this section is a little problem. When you have found the answer to the question put it in the brackets at the end of the line. If you cannot answer any question after trying it, do not waste time on it. Go on to the next. You may do your working in the margin if you wish.

Remember to work as quickly and as carefully as you can. You will have 20 minutes for this section. Now begin.

1. . . . . Add together 7, 6, 8. (.....)
2. . . . . Add together 5, 14, 93. (.....)
3. . . . . Subtract 18 from 27. (.....)
4. . . . . Subtract 19 from 43. (.....)
5. . . . What number multiplied by itself gives 49 ? (.....)
6. . . . . Divide 630 by 9. (.....)
7. Mary had 1s. 4½d. in her purse and 3½d. in her pocket. How much had she altogether ? (.....d.)
8. . . . . What is the cost of five 1½d. stamps ? (.....d.)
9. I buy an article costing 5½d. How much change have I out of 1s. ? (.....d.)
10. Two girls divide 3s. 6d. equally between them. How much does each get ? (.....s. ....d.)
11. . . . . What is half of 15s. ? (.....s. ....d.)
12. . . . . Multiply 15 by 7. (.....)
13. . . . . Multiply 55 by 12. (.....)
14. I bought one book costing 5s. 6d., one costing 4s. 9d., and one costing 3s. 3d. How much did I spend altogether ? (.....s. ....d.)
15. Mabel has 1s. 6d. Jane has half as much as Mabel. How much has Jane ? (.....d.)

GO STRAIGHT ON TO PAGE 6

16. Dick has 8d. Tom has half as much as Dick. How much have they together? (.....s. ....d.)
17. . . . . What is half of 5s. 6d.? (.....s. ....d.)
18. . . . . What is a quarter of £1? (.....s. ....d.)
19. A book costs 2s. 6d. How many can I get for £1? (..... books)
20. . . . . Divide 270 by 30. (.....)
21. Tom had 20 marbles. Jim had 4 times as many. How many had they together? (..... marbles)
22. . . . . Multiply 12 by 25. (.....)
23. . . . . What number divided by 9 gives 6? (.....)
24. . . . . Add together 312, 18, 256. (.....)
25. . . . . Subtract 258 from 420. (.....)
26. . . . . How many pennies are there in 10s.? (..... pennies)
27. . . . . Add together 429, 148, 175. (.....)
28. . . . . Add together 2763, 39, 478. (.....)
29. . . . . Subtract 497 from 5000. (.....)
30. Margaret had 5s. to spend. She spent 3s. 6d. How much had she left? . . . . . (.....s. ....d.)
31. There are in a school 275 boys, 325 girls, and 15 teachers. How many people are there altogether? (..... people)
32. Two numbers when multiplied together give 63. If one is 9 what is the other? . . . . . (.....)
33. . . . . Multiply 35 by 4 and add 9 to the answer. (.....)
34. Oranges cost 8d. per pound. How much will 5 pounds cost? . . . . . (.....s. ....d.)
35. . . . . How many half-crowns are there in 17s. 6d.? (.....half-crowns)



36. I divide 10s. 6d. equally among a number of boys giving them 6d. each. How many boys get 6d. ? (..... boys)
37. Pencils cost 2d. each. How many can I buy for 1s. 6d. ? (..... pencils)
38. I bought a shirt costing 10s. 6d. and a tie costing 3s. 6d. How much change had I out of £1 ? (.....s. ....d.)
39. Eggs cost 3s. 6d. per dozen. What is the cost of one egg ? (.....d.)
40. Bananas cost 1s. per pound. If there are four bananas in a pound how much does one banana cost ? (.....d.)
41. Tulip bulbs cost 5s. per dozen. How many can I buy for 2s. 6d. ? (..... bulbs)
42. I bought two 2½d. and two 1½d. stamps. How much change had I out of 1s. ? (.....d.)
43. A boy saves 6d. each week. How much will he save in 40 weeks ? (£..... : .....s. ....d.)
44. Multiply 36 by 5 and subtract 7 from the answer. (.....)
45. I buy three articles costing 10s. each. How much change have I out of £5 ? (£..... : .....s. ....d.)
46. What is the cost of 3 pounds of plums at 8½d. a pound ? (.....s. ....d.)
47. If tea costs 3s. 4d. a pound, how much will half a pound cost ? (.....s. ....d.)
48. There are 540 children in a school of 12 classes. If each class is the same size, how many children are in each class ? (..... children)
49. What is the cost of 3½ pounds of sugar at 5d. per pound ? (.....s. ....d.)
50. 600 children are going for a bus ride. If each bus holds 30, how many buses will be needed ? (..... buses)

**LOOK OVER YOUR ANSWERS IN THIS SECTION  
UNTIL YOU ARE TOLD TO STOP**